INITIAL STUDY/MITIGATED NEGATIVE DECLARATION

KAISER MEDICAL OFFICE BUILDING

LAKE FOREST, CALIFORNIA

SITE DEVELOPMENT PERMIT 1-11-1693

Prepared by:

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October 2011

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1.0 INTRODUCTION

In accordance with the California Environmental Quality Act (CEQA) and its Guidelines, this Initial Study (IS) has been prepared as documentation for a Mitigated Negative Declaration (MND) for the proposed Kaiser Medical Office Building (MOB) (project) at 26882 Towne Centre Drive in the City of Lake Forest (City). Consistent with *State CEQA Guidelines* Section 15071, this IS/MND includes a description of the project, an evaluation of the potential environmental impacts of the project, and findings from the environmental review.

This IS/MND evaluates the potential environmental impacts that may result from development of the proposed project. The City is the Lead Agency under CEQA. Implementation of this project would include approval of discretionary actions by the City. Therefore, the City Planning Commission is responsible for approval of the environmental documentation and for approval of the project.

1.1 CONTACT PERSON

Any questions regarding the preparation of this IS/MND, its assumptions, or conclusions, should be referred to:

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2.0 PROJECT DESCRIPTION

2.1 PROJECT LOCATION AND SITE DESCRIPTION

The proposed project site is located at 26882 Towne Centre Drive in the Foothill Ranch area of the City of Lake Forest (City) in Orange County, California. The project site is located just north of the northbound on-ramp to the Foothill Transportation Corridor (State Route 241 [SR-241]) from Lake Forest Drive. Towne Centre Drive forms the northern project boundary, with an automotive sales center located beyond. Lake Forest Drive is located to the east of the project site, and an existing medical office is located to the west. The proposed project location is shown in Figure 2.1. Surrounding land uses are illustrated in Figure 2.2.

Regional access to the site is provided by SR-241 (toll), which is immediately south of the project site, and Interstate 5 (I-5) located approximately 5 miles (mi) south of the project site.

The 5.85-acre (ac) project site (Assessor's Parcel Number [APN] Nos. 612-162-03 and 612-162-04) is currently vacant. The site has been subject to previous mass grading and is entirely surrounded by urban developed areas. Vegetation on site is limited to nonnative grassland species. The site is regularly maintained for vegetation control and is fenced on all four sides. The site is currently zoned Commercial within the Foothill Ranch Planned Community (PC-8) and designated as Commercial in the City's General Plan.

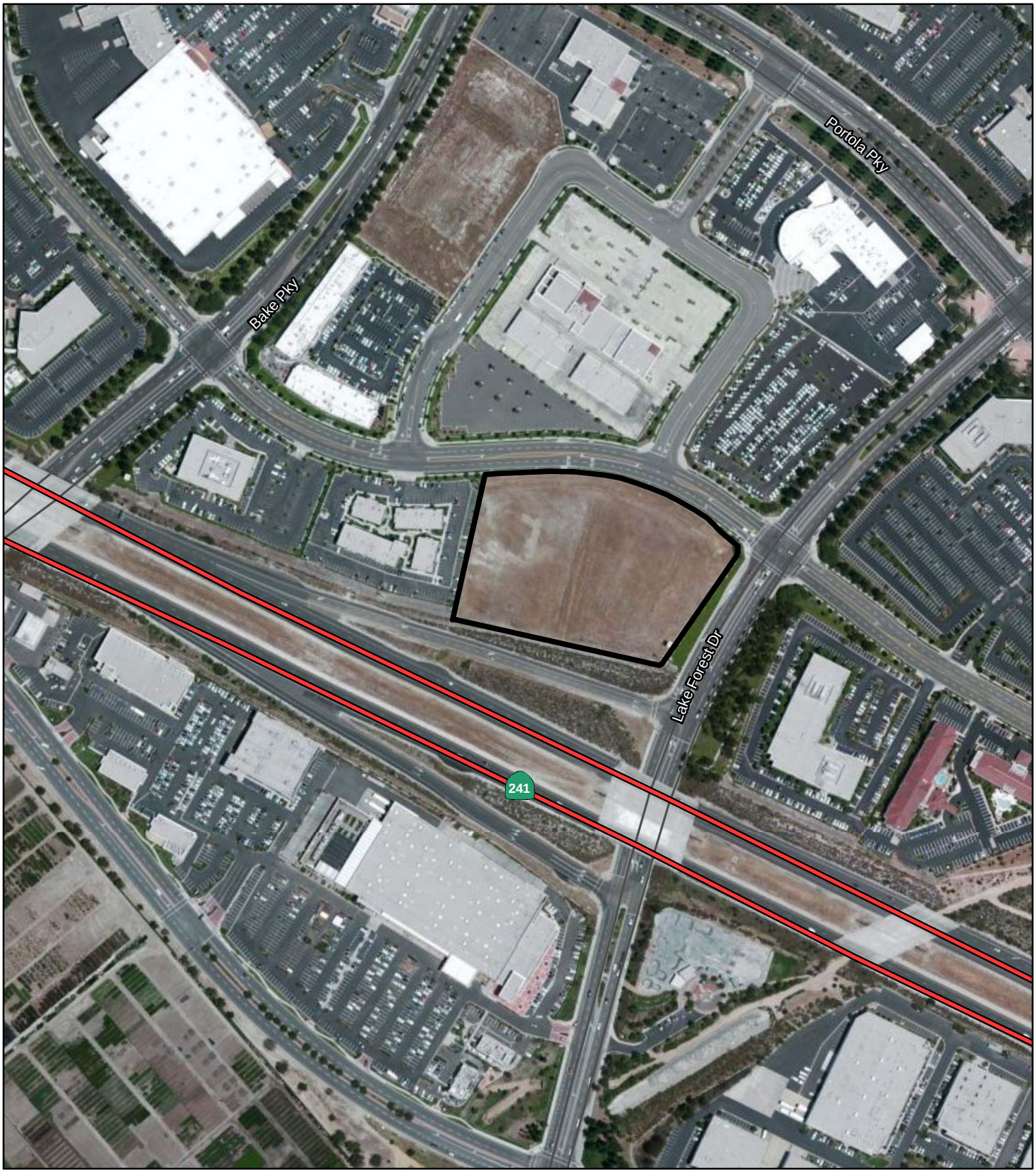
2.2 PROJECT CHARACTERISTICS

The proposed project includes construction and operation of a single-story, approximately 36,022 square foot (sf) medical office building. The proposed project will be developed in two separate phases. The first phase will include development and operation of approximately 21,531 sf of medical office space. The first phase of the proposed project is anticipated to be operational by January 2013. The second phase will include development and operation of an additional 14,491 sf of medical office space; no date has been set for completion of Phase 2. Table 2.A provides a breakdown of the development characteristics of each phase. Site plans showing project phasing are provided in Figures 2.3a and 2.3b.

Table 2.A: Development by Project Phase

Phase	Square Feet	Parking
Phase 1	21,531	136 standard spaces; 8 accessible spaces[1]
Phase 2	14,491	92 standard spaces; 5 accessible spaces
Total	**36,022**	**228 standard spaces; 13 accessible spaces**

[1] "Accessible spaces" are provided for handicapped persons. The City of Lake Forest Municipal Code (Chapter 9.168) requires two such spaces to be provided within a 23-foot (ft) wide area, lined to provide a 9 ft parking area on each side of a 5 ft loading and unloading area in the center. The minimum length of each parking space shall be 18 ft.



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LEGEND

Project Location

FIGURE 2.1

N

0 170 340

FEET

SOURCE: Bing (2010)

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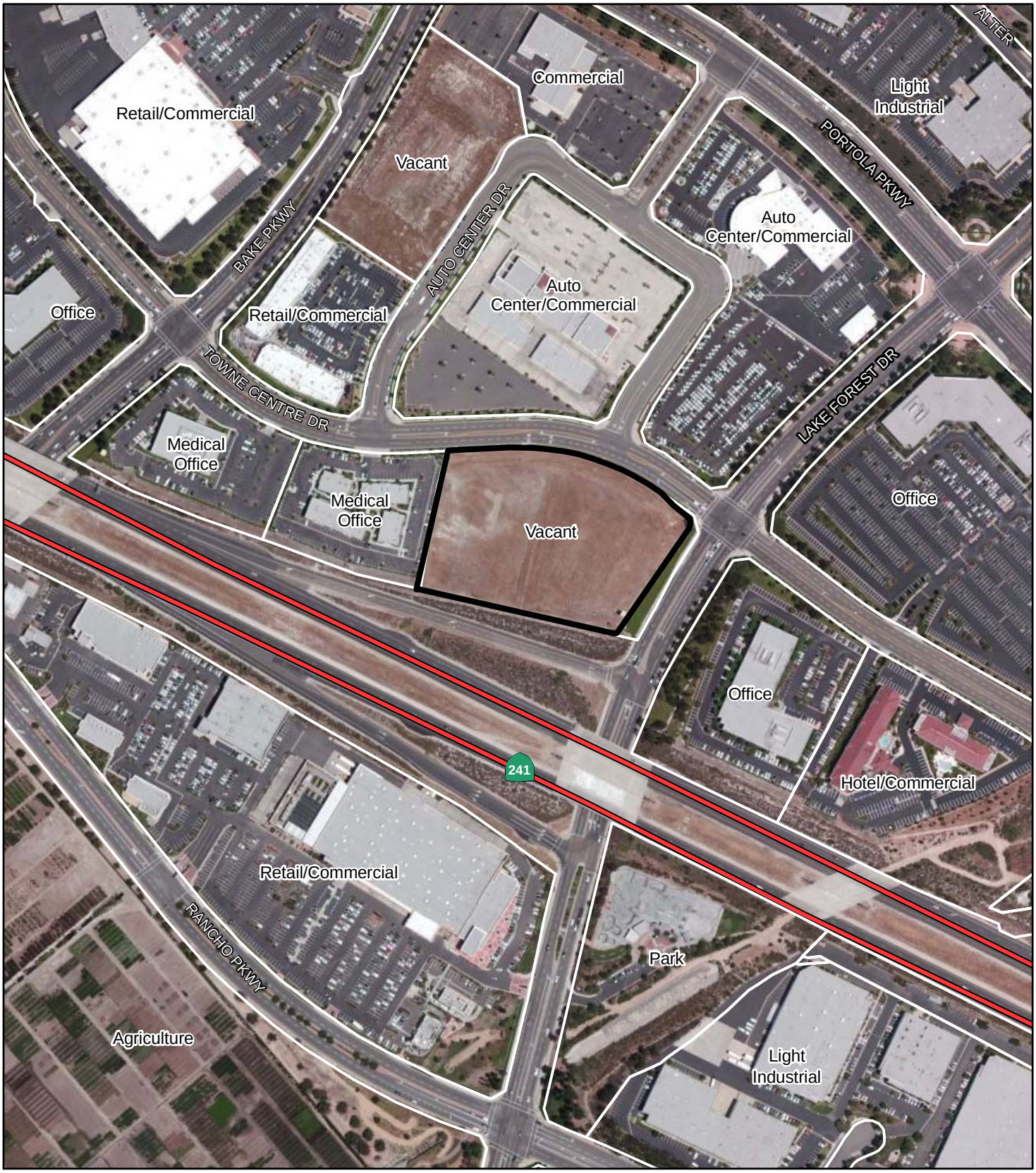
Kaiser Medical Office Project

Project Site Location



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LEGEND

Project Location

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SOURCE: Bing Maps (c. 2008); TBM (2008)

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FIGURE 2.2

Kaiser Medical Office Project

Surrounding Land Uses

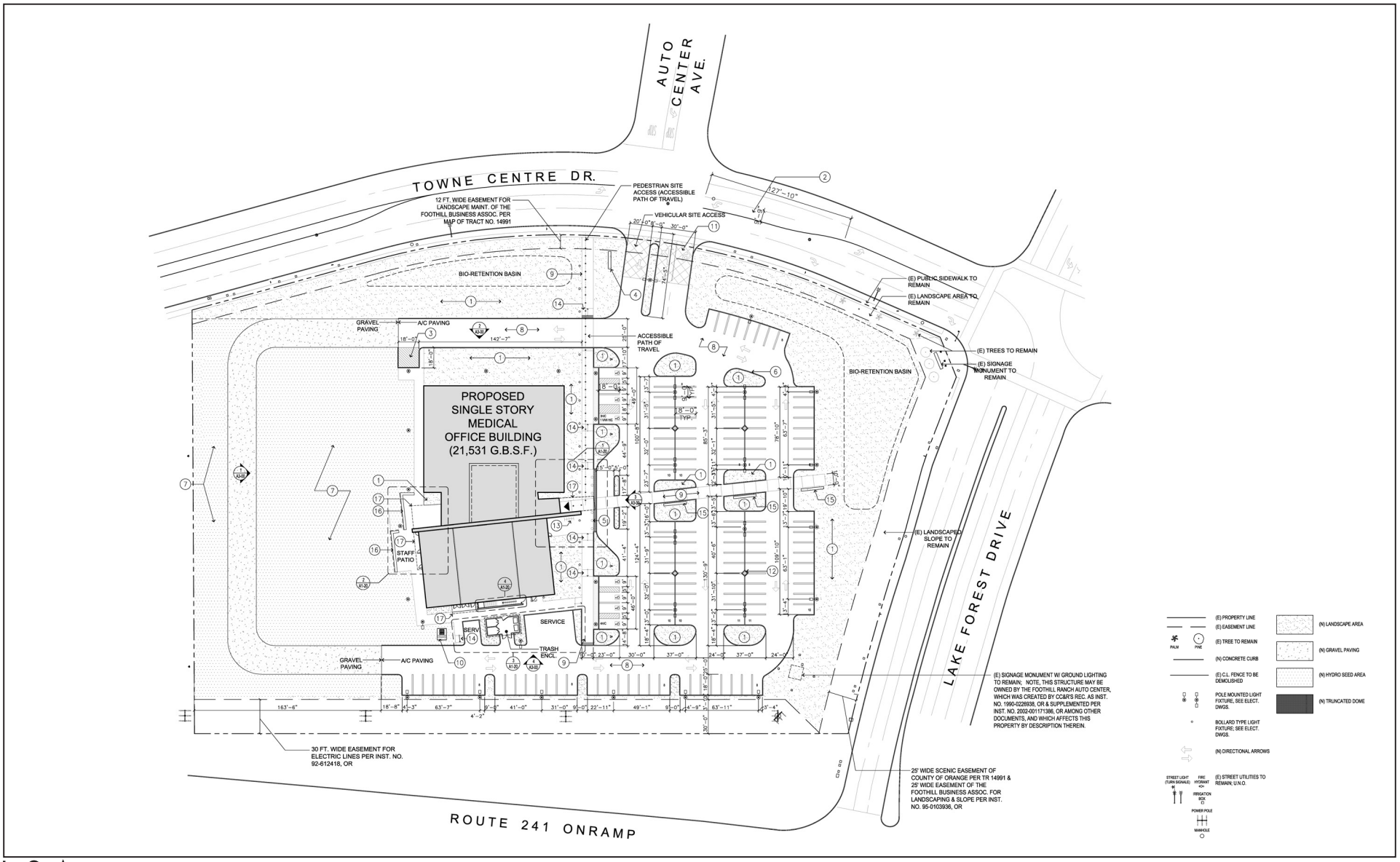

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FIGURE 2.3a

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0 60 120

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SOURCE: Frank R. Webb Architects

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Kaiser Medical Office Project

Phase 1 Site Plan

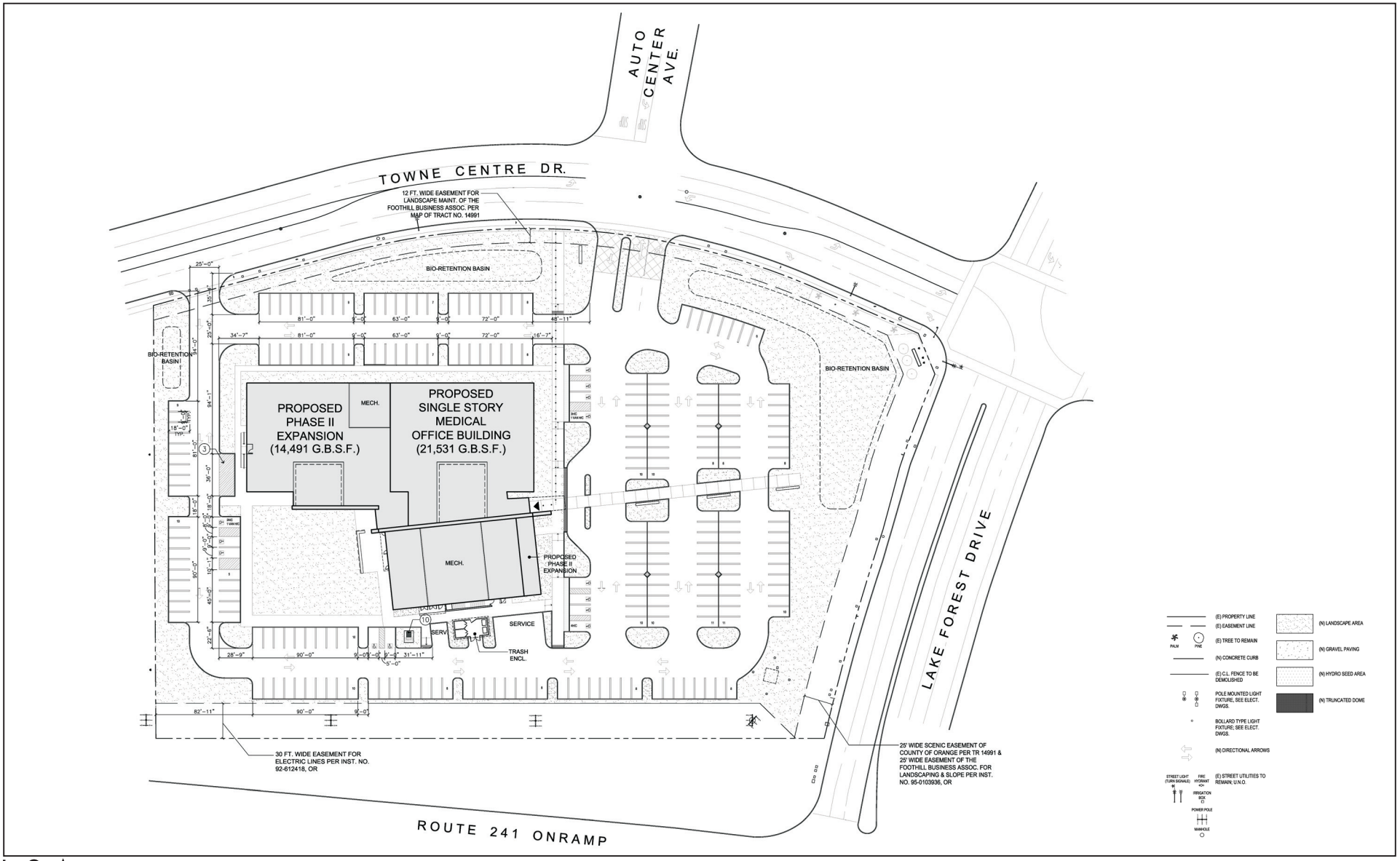

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FIGURE 2.3b

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0 60 120

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SOURCE: Frank R. Webb Architects

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Kaiser Medical Office Project

Phase 1 and 2 Site Plan

The operations of the proposed medical office building would be consistent with other medical office buildings in Orange County. The medical facility will include 24 offices, an outpatient pharmacy, a laboratory, an imaging/ radiology center, administrative offices, and storage. Table 2.B provides a breakdown of building use areas by phase. Although there may be outpatient surgeries, the medical office would not be a hospital, nor would it trigger Office of Statewide Health Planning Department (OSHPD) requirements (i.e., the facilities will not provide acute care and/or ambulatory surgery).

Table 2.B: Medical Office Building Uses

Use	Phase 1 (sf)	Phase 2 (sf)
Outpatient Services (provider offices, nursing stations, exam rooms, radiology)	10,622	10,104
Ancillary Services (pharmacy, laboratory)	4,039	1,095
Administration (administrative offices)	1,096	–
General Services (reception, check-in kiosk)	1,061	42
Indirect Support (janitorial, storage)	4,713	3,250
Total	**21,531**	**14,491**

sf = square feet

The medical office building would support approximately 85 employees (55 at Phase 1 and 30 at Phase 2), including 12 providers (doctors) with Phase 1 and 12 additional providers (doctors) with Phase 2. The medical office building would operate between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, excluding holidays, with some cleaning and maintenance occurring outside of those hours. No fleet of company vehicles is proposed to be associated with the medical office uses. It is expected that the proposed project would serve an average of 1,125 patients per day (450 with Phase 1 and 675 with Phase 2) at project build out.

Patients and other visitors would access the medical office building via Towne Centre Drive, through the main entrance on the eastern side of the building. Additional entrances would be located on the west and south sides of the building. In addition, a service and delivery area would be located on the south side of the building. The entrances on the south side of the building would provide access for staff and deliveries to the pharmacy and materials management (supplies and linens). Courier service for the laboratory, maintenance vendors, and service vendors would also access the building through the entrance on the south side. The entrances on the west side of the building would allow staff to circulate between the north and south portions of the building without crossing through the lobby and also provide access from the conference room and staff lounge to an outdoor patio area. Refer to Figures 2.3a and 2.3b for entrance locations and the location of the service area.

Building Design

The proposed Kaiser MOB has been designed to be consistent with the architecture found in the Foothill Ranch Planned Community, which is characterized by Mediterranean-inspired architecture with tiled roofs, arcade walkways, and modern office buildings with geometrical shapes and large amounts of glass.

The exterior surfaces of the building facades would be partially plastered with a smooth steel trowel finish. The remaining portions of the facades would be comprised of composite siding, stack stone, and clear anodized aluminum frames with glazed glass. As shown in Figures 2.4a and 2.4b, the thickness of the facades would vary to provide a change in color (green/yellow) and create a shade/shadow effect that would be further articulated through the use of metal reveals.

A ‘feature’ wall with a stack stone finish (light white/tan colors) would run through the building and would be an organizing element for the entire building that would be visible from inside and outside the building at varying heights.

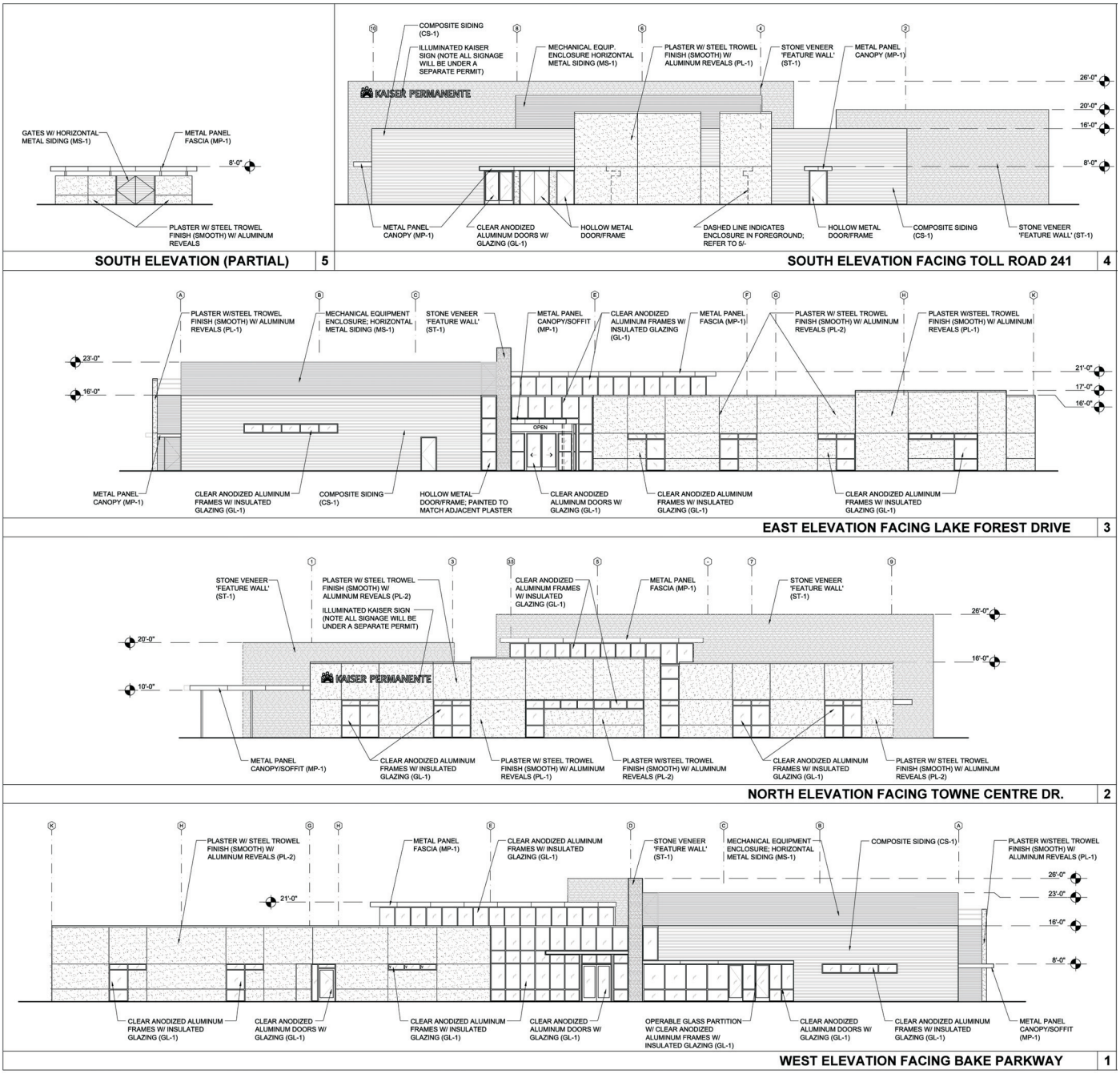

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FIGURE 2.4a

Kaiser Medical Office Project

Phase 1 Elevations

SOURCE: Frank R. Webb Architects

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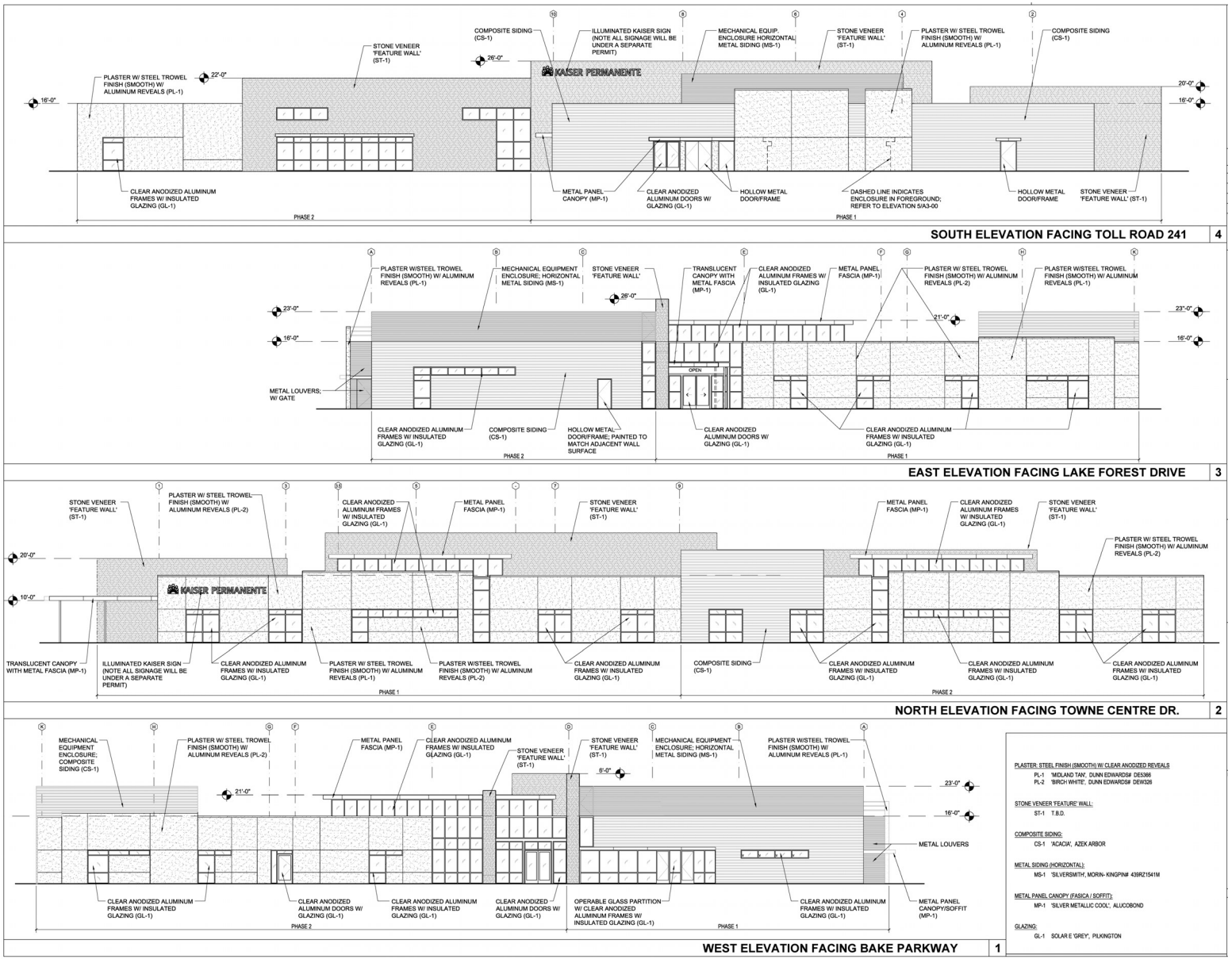

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FIGURE 2.4b

Kaiser Medical Office Project

Phase 1 and 2 Elevations

SOURCE: Frank R. Webb Architects

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A glazed row of windows above eye level (clerestory) with a metal panel fascia (cornice) would abut the stone 'feature' wall and would provide the waiting areas and lobby of the building with natural lighting. All windows would be dual-glazed (green glass) with a clear anodized aluminum frame system. Fascias and canopies would be a metal panel system with a painted finish (clear anodized color). The mechanical enclosure on the roof would be metal siding (horizontal) with a painted finish (clear anodized color). The exterior staircase leading to the roof would be enclosed by a plaster wall and metal louvers (clear anodized color).

The proposed building would be a maximum of 26 feet (ft) in height.

2.3 SITE DESIGN

Lighting

Lighting would be provided consistent with City standards. The project site would be illuminated from sunset to sunrise (generally 6:00 p.m. to 6:00 a.m., depending on the time of year).

Parking lots would be illuminated by 20 ft tall single-headed and 20 ft tall double-headed pole-mounted light fixtures that would be evenly spaced throughout the parking area. The project would also include 10 ft tall mounted light fixtures, which would be located at the intersection of the parking area and the pedestrian walkway. In addition, 8-inch-diameter lighted bollards would be located along the pedestrian walkway, linking the public sidewalk with the main building entrance. Landscaping uplighting would be located around the site perimeter, and building-mounted mini sconces would provide illumination of the exterior of the building. Project lighting would be designed to be contained within the project site, and spill light and glare would be minimized by design features (e.g., light shielding) to be implemented with the project.

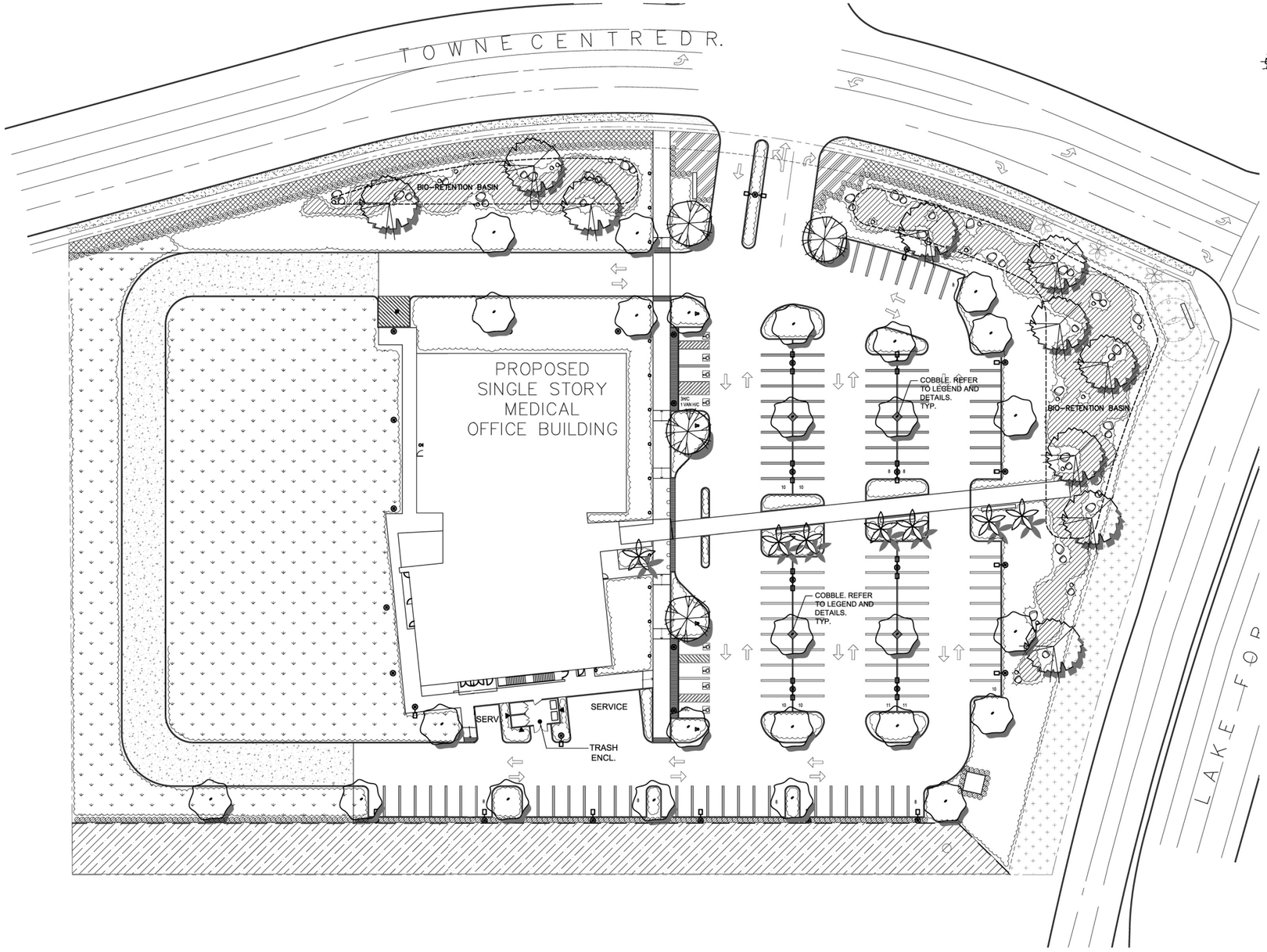
Landscaping

Figure 2.5 depicts the conceptual landscape plan for the project. No changes to the landscape plan are proposed during implementation of Phase 2. In compliance with the Foothill Ranch Planned Community Development Standards, the conceptual landscape plan includes landscaping in parking areas, as well as around the perimeter of the proposed project site. The proposed project includes approximately 47 new trees. The proposed project would also include shrubs and areas of turf on site. For additional discussion of landscaping requirements found in the City Zoning Ordinance and the Foothill Ranch Planned Community Development Standards, please refer to Section 4.10 of this IS/MND.

The irrigation system for the landscaping would consist of low-volume spray heads or bubblers connected to an automatic irrigation control system. The irrigation system would comply with the City's Water-Efficient Landscape Ordinance. No reclaimed water would be utilized on site.

Vehicular and Pedestrian Access

Vehicular access would be provided from Towne Centre Drive. The primary driveway to the proposed project site would form an intersection between the site driveway and Auto Center Drive (north–south) and Towne Centre Drive (east–west). The proposed project includes construction of a new left-turn pocket at the intersection of Towne Centre Drive and Auto Center Drive to facilitate vehicular access to the project site. A second access point would be constructed during the second phase of project development. The secondary access driveway would be located on the west side of the project site and would provide right-in and right-out access only.



PLANTING LEGEND

SYMBOL	BOTANICAL NAME	COMMON NAME	SIZE	REMARKS
	DETENTION BASIN TREE (24" BOX)			
	PLATANUS ACERIFOLIA 'BLOODGOOD'	LONDON PLANE TREE MULTI-TRUNK	24" BOX	NATURAL DOUBLE STAKE
	VERTICAL ACCENT PALM (25' B.T.H)			
	PHOENIX DACTYLIFERA	DATE PALM	12' B.T.H	SKINNED
	PARKING LOT CANOPY TREE (24" BOX)			
	RHUS LANCEA	AFRICAN SUMAC STANDARD	24" BOX	DOUBLE STAKE
	ACCENT TREE (36" BOX)			
	CERCIDIUM HYDRID 'DESERT MUSEUM'	THORNLESS PALO VERDE	24" BOX	NATURAL SINGLE STAKE
	EXISTING TREES			
	WASHINGTONIA ROBUSTA	MEXICAN FAN PALM PROTECT IN PLACE		
	PINUS ELDARICA	MONDELL PINE PROTECT IN PLACE		
	EXISTING SHRUBS			
	LONICERA JAPONICA 'HALLIANA'	HALLS HONEYSUCKLE	PROTECT IN PLACE	
	EXISTING STREETSCAPE			
	TURF	MARATHON FESCUE	PROTECT IN PLACE	
	NEW STREETSCAPE PLANTING PER FOOTHILL RANCH BUSINESS ASSOCIATION GUIDELINES (FLATS, 1 AND 5 GAL)			
	LIGUSTRUM JAPONICUM 'TEXANUM'	TEXAS PRIVET	5 GAL.	3'-0" O.C.
	LONICERA JAPONICA 'HALLIANA'	HALLS HONEYSUCKLE	1 GAL	3'-0" O.C.
	COLOR ACCENT	TO BE SELECTED	1 GAL	3'-0" O.C.
	SHRUBS / GROUNDCOVERS (FLATS, 1 AND 5 GAL)			
	AGAVE SPP.	AGAVE	5 GAL.	3'-0" O.C.
	ALYOGYNE HUEGELII	BLUE HIBISCUS	5 GAL.	3'-0" O.C.
	ANIGOZANTHUS FLAVIDUS	KANGAROO PAW	5 GAL.	2'-0" O.C.
	BOUGAINVILLEA SPP.	BOUGAINVILLEA	5 GAL.	3'-0" O.C.
	BACCHARIS PILULARIS 'TWIN PEAKS'	DWARF COYOTE BUSH	1 GAL.	4'-0" O.C.
	CALLISTEMON VIMINALIS 'LITTLE JOHN'	DWARF WEEPING BOTTLEBRUSH	5 GAL.	3'-0" O.C.
	COTONEASTER DAMMERI 'LOWFAST'	BEARBERRY COTONEASTER	1 GAL.	3'-0" O.C.
	DALEA GREGGII	TRAILING INDIGO BUSH	5 GAL.	2'-0" O.C.
	DIETES 'BICOLOR'	YELLOW IRIS	5 GAL.	2'-0" O.C.
	ECHEVERIA SPP.	HENS AND CHICKS	1 GAL.	1'-0" O.C.
	GALVEZIA SPECIOSA 'FIRECRACKER'	ISLAND BUSH SNAPDRAGON	5 GAL.	3'-0" O.C.
	GREVILLEA 'NOELLII'	N.C.N.	5 GAL.	3'-0" O.C.
	HESPERALOE PARVIFLORA	RED YUCCA	5 GAL.	2'-0" O.C.
	LANTANA SPP.	LANTANA	5 GAL.	2'-0" O.C.
	LAVATERA ASSURGENTIFLORA	MISSION MALLOW	5 GAL.	3'-0" O.C.
	LEUCOPHYLLUM SPP.	SAGE	5 GAL.	3'-0" O.C.
	MYOPORUM PARVIFOLIUM SPP.	N.C.N.	1 GAL.	4'-0" O.C.
	MUHLENBERGIA CAPILLARIS 'REGAL MIST'	MUHLY GRASS	5 GAL.	30" O.C.
	ROSMARINUS OFFICINALIS 'IRENE'	ROSEMARY	5 GAL.	3'-0" O.C.
	ROSMARINUS OFFICINALIS 'TUSCAN BLUE'	UPRIGHT ROSEMARY	5 GAL.	3'-0" O.C.
	SALVIA GREGGII	RED SALVIA	5 GAL.	2'-0" O.C.
	SALVIA LEUCOPHYLLA	PURPLE SAGE	5 GAL.	2'-0" O.C.
	SENNA ARTEMISIOIDES	FEATHERY CASSIA	5 GAL.	3'-0" O.C.
	SENECIO MANDRALISCAE	BLUE CHALK STICKS	FLATS	8" O.C.
	HYDROSEED AREA (HYDROSEED MIX)			
	GAZANIA SPLEDENS	GAZANIA (MIXED COLORS)	HYDROSEED MIX	
	VINES (5 GAL)			
▼	MACFADYENA UNGUIS-CATI	CAT'S CLAW VINE	5 GAL.	SPLAY ON WALL
	RETENTION BASIN PLANTS (1 AND 5 GAL)			
	DISTICHLIS SPICATA	SALT GRASS		
	NASSELLA PULCHRA	PURPLE NEEDLE GRASS		
	JUNCUS PATENS 'ELK BLUE'	CALIFORNIA GRAY RUSH		
	SESLERIA AUTUMNALIS	AUTUMN GRASS		
	MUHLENBERGIA RIGENS	DEER GRASS		
	POWER LINE EASEMENT			
	CONTRACTOR TO PROVIDE 3" LAYER OF SHREDDED BARK MULCH.			
	DECORATIVE RIVER ROCK AND BOULDERS			
	LANDSCAPE BOULDERS. 2' TO 5' DIA. COLOR: TO BE SELECTED.			
	30" - 3" TO 6" DIA. COLOR: TO BE SELECTED 50% - 4" TO 8" DIA. COLOR: TO BE SELECTED 20% - 8" TO 12" DIA. COLOR: TO BE SELECTED			

PLANTING NOTES:

A. ALL FLAT, SHRUB AND GROUNDCOVER AREAS TO BE TOP DRESSED WITH 3" LAYER OF FINE SHREDDED BARK MULCH. ALL SLOPE AREAS 2:1 OR GREATER TO BE TOP DRESSED WITH 4" LAYER OF FINE SHREDDED BARK MULCH. ALL TOP DRESSING TO BE INSTALLED TO TOP OF WALK.

B. ALL STREET TREES AND ALL TREES WITHIN 5' OF HARDSCAPE ELEMENTS, SUCH AS CURBS, WALLS, BUILDINGS OR WALKS, SHALL BE PROVIDED WITH APPROVED ROOT BARRIER CONTROL DEVICES SUCH AS MODEL NO. UB 18-2, AVAILABLE FROM DEEPROOT: 800-458-7668 OR www.deeproot.com. INSTALLATION TO BE PER MANUFACTURER'S RECOMMENDATIONS AND SPECIFICATIONS AND BE A MINIMUM OF 10 LINEAL FEET.

C. CONTRACTOR TO REPAIR OR REPLACE ANY EXISTING WORK DONE BY OTHERS DAMAGED DUE TO CONSTRUCTION.

D. CONTRACTOR TO VERIFY ALL UTILITIES AND EXISTING CONDITIONS IN FIELD PRIOR TO CONSTRUCTION.

E. ALL PLANTING TO BE IRRIGATED WITH LOW VOLUME SPRAY HEADS OR BUBBLERS OR DRIP CONNECTED AUTOMATIC IRRIGATION CONTROL TO VALVES AND TIED INTO A CENTRAL AUTOMATIC CONTROLLER.

F. ALL PLANTING AND IRRIGATION TO COMPLY WITH CITY OF LAKE FOREST LANDSCAPE GUIDELINES AND CALIFORNIA ASSEMBLY BILL 1881, THE CITY ADOPTED WATER EFFICIENT LANDSCAPE ORDINANCE.

G. ALL PROPOSED GAS METERS, BACK FLOW DEVICES, TRANSFORMERS OR ANY OTHER ABOVE GROUND EQUIPMENT WILL BE SCREENED WITH SHRUBS OR OTHER LANDSCAPING PER CITY GUIDELINES.

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SOURCE: Frank R. Webb Architects

I:\CLF1101\G\Landscape Plan.cdr (9/6/11)

FIGURE 2.5

Kaiser Medical Office Project
Conceptual Landscape Plan

Pedestrian access to the site would be from Towne Centre Drive, which is developed with sidewalks in the existing condition. Pedestrian access would be facilitated by a designated pedestrian walkway linking the public sidewalk on Towne Centre Drive with the medical office entrance. Another designated pedestrian walkway would link the parking area on the east side of the medical office building with the building entrance. Refer to Figures 2.3a and 2.3b for an illustration of on-site pedestrian walkways. All of these pedestrian walkways would utilize enhanced paving, accent landscaping, shade trees, and buffers from adjacent parking stalls.

There would be two outdoor seating areas on site. Some staff seating would be provided on the west side of the building adjacent to the conference room and staff lounge. There would also be some outdoor seating for visitors adjacent to the lobby on the west side of the building and some seating on the east side of the building in the exterior vestibule. In addition, some seating would be provided in the parking areas along the main circulation path.

Police and Fire Access. Sheriff and Fire Department access would be available from Towne Centre Drive. Phase 1 would include the installation of a gravel "ring road" to provide adequate emergency access prior to development of Phase 2 (refer to Figure 2.3a). Phase 2 would include installation of a new fire hydrant to be located in the southwest corner of the project site.

On-site fire suppression would be provided by a sprinkler system installed in the proposed MOB.

Parking

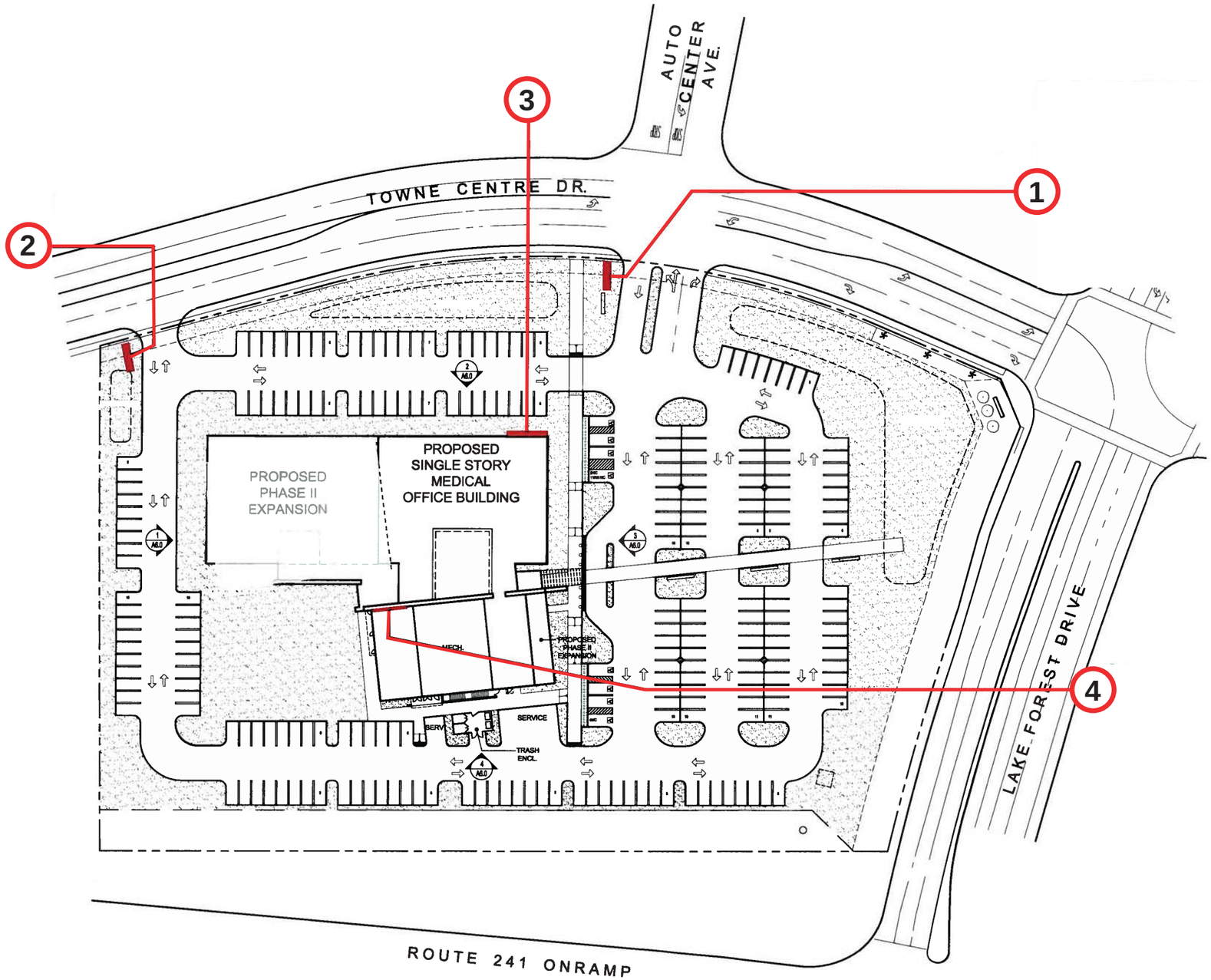
Implementation of the proposed project would include construction of parking areas to serve the medical office use. As shown in Figures 2.3a and 2.3b, parking spaces would surround the medical office on all four sides. As outlined in Table 2.A, Phase 1 would construct 144 parking spaces (136 standard; 8 handicapped-accessible spaces) and Phase 2 would construct an additional 97 spaces (92 standard; 5 handicapped-accessible spaces) for a total of 241 spaces on site. The number of parking spaces provided would be consistent with the minimum requirements outlined in the City's Parking Ordinance. One designated ambulance parking space would be located on site.

Bicycle racks would also be provided on site. The bicycle racks would be located on the south side of the feature wall adjacent to the main entry of the building.

Signage

As shown in Figure 2.6, the proposed project would feature four signs. Wall signage would be installed on the south and north elevations of the medical office building. The fascia signs would feature the Kaiser Permanente name and logo. The wall-mounted signs would be approximately 60 sf per sign and would feature 23-inch halo-lit channel letters with opaque white faces and a halo-lit channel logo with an opaque blue face. The halo-lit channel letters and logo would not illuminate on the face because the face is opaque and the lighting would face backwards toward the wall. This light would "flood" the wall behind the letter, allowing the illumination to come out from behind and around the edges of the letters and logo. This is often referred to as a "halo" effect. Refer to Figure 2.6 for an illustration of the proposed wall-mounted signs.

A dual-face monument sign would be installed on the western side of the main project driveway along Towne Centre Drive. The monument sign would be constructed of materials that are compatible with the building materials and would be approximately 5 ft tall and 9 ft wide with 45 sf of sign area. The monument sign would include the Kaiser Permanente name, logo, and address. The sign would also indicate in both English and Spanish that no emergency services are provided on site. The sign would be illuminated by uplighting. Refer to Figure 2.6 for an illustration of the proposed monument sign.



KAISER PERMANENTE
Foothill Ranch Medical Offices
26882 Towne Center Dr
NO Emergency Services
NO Hay Servicios de Emergencia

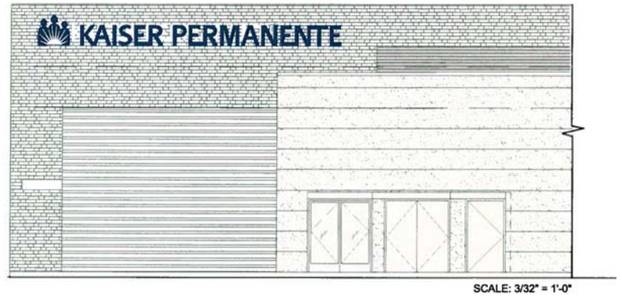
SCALE: 3/8" = 1'-0"

1 ENTRANCE IDENTIFICATION MONUMENT

KAISER PERMANENTE
← Staff Entrance

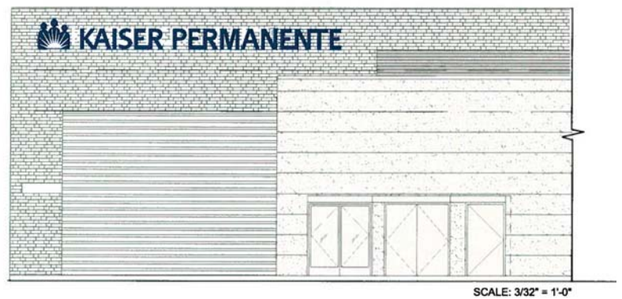
SCALE: 3/8" = 1'-0"

2 SECONDARY SITE SIGN



SCALE: 3/32" = 1'-0"

3 BUILDING IDENTIFICATION FASCIA SIGN



SCALE: 3/32" = 1'-0"

4 BUILDING IDENTIFICATION FASCIA SIGN

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FIGURE 2.6

NO SCALE
SOURCE: SKA DESIGN
I:\CLF1101\G\Proposed Sign Prog.ai (8/11/11)

Kaiser Medical Office Project
Proposed Sign Program

A second monument sign would be installed on the western side of the secondary access driveway on Towne Centre Drive (west of the main project driveway). This monument sign would be constructed of materials that are compatible with the building materials and would be approximately 3 ft tall and 2 ft wide with 6 sf of sign area. The monument sign would include the Kaiser Permanente name and logo and indicate that the driveway is primarily a staff entrance. The sign would be illuminated by uplighting. Refer to Figure 2.6 for an illustration of the proposed monument sign.

The Foothill Auto Center sign currently located in the southeast corner of the project site would remain after project implementation.

Water Quality Best Management Practices

Phase 1 of the proposed project would include bio-retention basins on the north and northeast sides of the project site to treat runoff from the site. For Phase 1, storm water runoff from the parking lot and the majority of the building would flow to the northeast corner of the site to the proposed bio-retention basin. The remainder of storm water runoff would flow to a second bio-retention basin along the north property line. Figures 2.3a and 2.3b illustrate the locations of the proposed best management practices (BMPs). It is currently anticipated that BMPs for Phase 2 will be located along the west side of the site.

Green Building Features

In addition to compliance with California Green Building Standards (CalGreen), the proposed project would incorporate the following energy and water conservation features:

- Natural daylight through the use of clerestory windows above the waiting rooms
- Energy-efficient lighting and mechanical systems
- Water-efficient plumbing fixtures
- Water-efficient landscaping, including the utilization of native plant species in addition to drought-tolerant and ornamental species
- The MOB would be a nonsmoking facility/site

2.4 INFRASTRUCTURE IMPROVEMENTS

On- and Off-Site Infrastructure

The project infrastructure components to be implemented would require improvements to, and connection with, existing infrastructure systems. These systems, which consist of water, electricity, natural gas, sanitary sewer, storm water drains, and telecommunications would be constructed on site and would be fully provided and maintained by the property owner. All on-site systems would connect to existing infrastructure in Towne Centre Drive, with the exception of telecommunications and electricity, which would connect to service points located adjacent to the project site along Lake Forest Drive.

Specifically, the on-site infrastructure improvements would include:

- Installation of a new gas meter and connection to the gas line in Towne Centre Drive.
- Installation of a fire hydrant to be located in the southwest corner of the project site (Phase 2).

- Installation of a new electrical transformer. The exact location of the transformer would be selected in consultation with Southern California Edison (SCE); however, the most likely location would be the landscaped area immediately south of the electrical room (in the southwest corner of the building). All internal power distribution would be underground.
- Installation of one 4-inch water line and a water meter. The new water line would connect to an 8-inch water line in Towne Centre Drive.
- Installation of a 6-inch sanitary sewer line that would connect to the existing 6-inch sanitary sewer line in Towne Centre Drive.

2.5 IMPLEMENTATION AND PHASING

The proposed project is planned for two development phases. Phase 1 will include site preparation, grading, construction of approximately 21,531 sf of medical office space and 144 parking spaces, and landscaping of the proposed project site. Phase 1 is expected to take 10 months to complete. Phase 2 will include site construction of approximately 14,491 sf of medical office space and 97 parking spaces, and additional landscaping. Phase 2 is also expected to take 10 months to complete; however, no date has been set for completion of Phase 2. All construction equipment would be staged on site for the duration of the construction periods.

Although only Phase 1 is expected to be operational by January 2013, build out of both phases in 2013 is evaluated in the subsequent sections of this environmental document to present a worst-case evaluation of the proposed project.

Grading will be balanced on site during construction; no import or export of soil is anticipated.

2.6 DISCRETIONARY ACTIONS

Development of the proposed project would require discretionary approvals by the City, the Lead Agency. The City's discretionary actions include the following:

- **Site Development Permit:** The Site Development Permit (SDP) process provides for the review of detailed plans for a proposed use or development project. An SDP may be approved, approved subject to conditions, or denied (based on the findings specified in Section 9.184.040 of the Lake Forest Municipal Code) by the City Planning Commission at a public hearing.
- **Planned Sign Program (PSP):** The Planned Sign Program process is to ensure coordination and compatibility between all signs within a commercial area and to allow for flexibility through permitting exceptions from the general sign requirements. This project requires an amendment to the existing Planned Sign Program for Foothill Ranch (PC-8) to accommodate the project's proposed signage.

Other Ministerial City Actions. Ministerial permits/approvals (e.g., grading permits, encroachment permit, curb cut permit, building permit, lot line adjustment) would be issued by the City to allow site preparation, curb cuts, and connections to the utility infrastructure.

Probable Future Actions by Responsible Agencies. Because the project also involves approvals, permits, or authorization from other agencies, these agencies are "Responsible Agencies" under the California Environmental Quality Act (CEQA). Section 15381 of the *State CEQA Guidelines* defines Responsible Agencies as public agencies other than the Lead Agency that will have discretionary approval power over the project or some component of the project, including mitigation. These agencies include, but are not limited to, the agencies identified in Table 2.C.

Table 2.C: Probable Future Actions by Responsible Agencies

Responsible Agency	Action
State Water Resources Control Board (SWRCB)	Applicant must submit Permit Registration Documents, including a Notice of Intent (NOI), to comply with the National Pollution Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities

2.7 RELATIONSHIP TO OTHER DOCUMENTS

Pursuant to CEQA Guidelines Section 15150, this IS/MND incorporates by reference all or portions of technical documents that relate to the proposed project or provide additional information concerning the environmental setting in which the project is proposed. The information disclosed in this IS/MND is based in part on the following technical studies and/or planning documents that include the project site or provide information addressing the general project area:

1. City of Lake Forest General Plan (May 2011)
2. City of Lake Forest Zoning Code (June 2010)
3. City of Lake Forest Zoning Map
4. City of Lake Forest Master Environmental Impact Report and Mitigation Monitoring Program (June 1994)

3.0 ENVIRONMENTAL CHECKLIST FORM

1.	Project Title: Kaiser Medical Office Building (MOB)
2.	Lead Agency Name and Address: City of Lake Forest 25550 Commercentre Drive, Suite 100 Lake Forest, CA 92630
3.	Contact Person and Phone Number: Jennifer Mansur, AICP (949) 461-3472
4.	Project Location: 26882 Towne Centre Drive (southwest corner of Lake Forest Drive and Towne Centre Drive)
5.	Project Sponsor's Name and Address: Kaiser Permanente 825 Colorado Boulevard, Suite No. 222 Los Angeles, CA 90041
6.	General Plan Designation: Commercial
7.	Zoning: PC-8 – Foothill Ranch (Commercial)
8.	Description of Project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheet(s) if necessary.) Refer to Chapter 2.0 of this IS/MND
9.	Surrounding Land Uses and Setting: (Briefly describe the project's surroundings.) Refer to Chapter 2.0 of this IS/MND
10.	Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement): Refer to Chapter 2.0 of this IS/MND

4.0 ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" prior to implementation of mitigation as indicated by the checklist on the following pages.

☒ Aesthetics	☐ Agriculture Resources	☐ Air Quality
☒ Biological Resources	☒ Cultural Resources	☒ Geology / Soils
☐ Greenhouse Gas Emissions	☒ Hazards & Hazardous Materials	☒ Hydrology / Water Quality
☐ Land Use / Planning	☐ Mineral Resources	☒ Noise
☐ Population / Housing	☐ Public Services	☐ Recreation
☐ Transportation / Traffic	☒ Utilities / Service Systems	☒ Mandatory Findings of Significance

DETERMINATION (To be completed by the Lead Agency):

On the basis of this initial evaluation:

☐ I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.

☒ I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.

☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

☐ I find that the proposed project MAY have a "potentially significant" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Jennifer Mansur
Signature

10/4/11
Date

Jennifer Mansur, AICP Associate Planner
Printed Name

City of Lake Forest
For

EVALUATION OF ENVIRONMENTAL IMPACTS:

1) A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g. the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g. the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2) All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3) Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect is significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4) "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from Section XVII, "Earlier Analyses," may be cross-referenced).

5) Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:

   a) Earlier Analyses Used. Identify and state where they are available for review.

   b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.

   c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6) Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g. general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7) Supporting Information Sources. A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8) This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.

9) The explanation of each issue should identify:

   d) the significance criteria or threshold, if any, used to evaluate each question; and

   e) the mitigation measure identified, if any, to reduce the impact to less than significance.

4.1 Aesthetics Would the project:	**Potentially Significant Impact**	**Less than Significant With Mitigation Incorporated**	**Less Than Significant Impact**	**No Impact**
(a) Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
(b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
(c) Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☒	☐
(d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	☐	☒	☐	☐

Discussion:

(a) **No Impact.** A scenic vista is defined as a viewpoint that provides expansion views of a highly valued landscape for the benefit of the general public. Aesthetic components of a scenic vista generally include (1) scenic quality, (2) sensitivity level, and (3) view access. According to the City's CEQA Significance Thresholds Guide, the City has not designated any scenic vistas within its jurisdiction. Therefore, there are no scenic vistas in the project area, and no impacts would occur.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

(b) **No Impact.** The Caltrans Landscape Architecture Program administers the Scenic Highway Program, contained in Streets and Highways Code Sections 260–263. State highways are classified as either Officially Listed or Eligible. SR-241, located south of the project site, is not identified as an eligible or State-designated Scenic Highway.[1] In addition, according to the City's CEQA Significance Thresholds Guide, the City has not designated any scenic corridors within its jurisdiction. However, within the City, the County of Orange Scenic Highway Plan identifies El Toro Road as a scenic highway. The proposed project site is not located adjacent to El Toro Road. Therefore, the proposed project does not have the potential to damage resources within a State or locally designated scenic roadway and no mitigation is required. Additionally, there are no scenic rock outcroppings located within the project limits, and the proposed project would not remove any existing on-site trees. Therefore, the proposed project would not damage scenic resources, and no mitigation is required.

Significance Determination: No Impact.

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact.

(c) **Less than Significant.** Implementation of the proposed project would result in the construction of a one-story medical office building and related parking areas on a currently vacant site. Figure 2.5 depicts the conceptual landscape plan for the project. In compliance with the Foothill Ranch Planned Community Development Standards, the conceptual landscape plan includes landscaping in parking areas as well as

[1] California Department of Transportation website: http://www.dot.ca.gov/hq/LandArch/scenic_highways.

around the perimeter of the proposed project site. In total, the proposed project includes approximately 47 new trees. Existing landscaping along Lake Forest Drive and SR-241 would not be disturbed by project implementation, and areas fronting Towne Centre Drive would be landscaped. The proposed project would also include shrubs and areas of turf on site.

It is expected that the proposed medical office building would be visible to passing motorists on Towne Centre Drive and SR-241; however, all areas immediately surrounding the project site are of a land use character similar to the proposed project (i.e., urban, built up), so the proposed project would not substantially change the character of views currently experienced by off-site viewers.

The Whiting Ranch Wilderness Park is a prominent visual feature in the northern portion of the City, located generally between the planned communities of Portola Hills and Foothill Ranch. The proposed project site is located approximately 1,000 ft from Whiting Ranch and presumably would be visible from some park trails. However, the project site is located in an existing urbanized area and is surrounded by urban development on all four sides. Implementation of the proposed project would not substantially damage or degrade views from Whiting Ranch because it would not interrupt views or substantially change the nature of views in the project vicinity. Therefore, implementation of the proposed project would have a less than significant impact on views from Whiting Ranch.

The proposed project would also be visible to people in the existing office building located west of the project site. Occupants of the building currently have a view of a vacant site with vegetation. After project implementation, that view would be replaced by the proposed office building and surrounding parking areas. Following completion of Phase 1, the proposed medical office building would be approximately 180 ft from the existing office building. Following Phase 2, the proposed medical office building would be approximately 60 ft from the existing office building located to the west of the project site. In the interim period between Phase 1 and Phase 2, the edge of the existing office building parking area located to the west and the proposed project site would continue to be separated by a substantial open space area, as shown in Figure 2.5. During this period, the open space area would be planted with a drought-tolerant groundcover (*Ganzania* sp). All areas immediately surrounding the project site are of a land use character similar to the proposed project (i.e., urban, built up), so the proposed project would not substantially change the character of views currently experienced on adjacent sites. Furthermore, the architecture of the proposed project would be comparable to and compatible with the existing architecture in the Foothill Ranch Planned Community so it would not alter the character of the larger community. Therefore, visual impacts associated with project implementation would be less than significant, and no mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

(d) **Less than Significant.** Spill light occurs when lighting standards such as streetlights are not properly aimed or shielded to direct light to the desired location and light escapes and partially illuminates a surrounding location. Spill light can be measured in terms of footcandles[2] (fc). Table 4.1.A provides examples of illumination levels from common sources such as daylight. Glare is the result of improperly aimed or blocked lighting sources that are visible against a dark background such as the night sky.

[2] A footcandle is a unit of measure of the intensity of light falling on a surface, equal to one lumen per square foot and organelle defined with reference to a standardized candle burning at 1 foot from a given surface. Source: The American Heritage Dictionary of the English Language, Fourth Edition, Houghton Mifflin Company, 2000.

Table 4.1.A: Footcandle Levels from Common Light Sources

Source	Footcandles (fc)
Starlight	0.0002
Moonlight	0.02
Gas Station Pump Area	5
Office Lighting	70–150
Car Sales Areas	100
Professional Sports Arena	100–150
Direct Sunlight	5,000–10,000

Glare may also refer to the sensation experienced looking into an excessively bright light source that causes a reduction in the ability to see or causes discomfort. Glare generally does not result in illumination of off-site locations, but results in a visible source of light viewable from a distance.

The project site is currently vacant, and as such, no lighting currently exists on site. The proposed project would introduce nighttime lighting to the project site. After project implementation, site lighting would consist of parking lot lights, illuminated bollards along walkways, uplighting in landscaped areas, and exterior and interior building illumination. The proposed project site would also include illuminated signage. The project site would be illuminated from sunset to sunrise (generally 6:00 p.m. to 6:00 a.m., depending on the time of year). The project applicant submitted a preliminary photometric plan (Appendix A) that indicates that spill lighting would be between 0.1 and 8.3 fc at the project site boundaries. The photometric analysis took into consideration the proposed grading plan and variations in topography but does not account for screening measures such as perimeter landscaping. It should be emphasized that this assessment of potential lighting impacts is based on a conceptual lighting scheme, and refinements in design and specifications would occur with finalization of project design under review by the City. For the purposes of this environmental analysis, however, the proposed project could result in a substantial amount of new nighttime light, and mitigation is required. Mitigation Measures A-1 and A-2 require the project applicant to prepare a comprehensive lighting plan prior to construction and to prepare a final photometric survey prior to occupancy. These measures are intended to minimize impacts of new sources of light and glare to adjacent land uses, limit nighttime lighting to that necessary for security, and ensure that lighting is shielded to reduce glare and spill lighting effects. Implementation of these mitigation measures would reduce potential impacts related to new lighting to a less than significant level.

Normally, recreation and open spaces uses would be considered to be potentially light sensitive, however, nearest recreation uses, the Etnies Skate Park of Lake Forest, located southeast of the project site beyond SR-241, is illuminated at night and would not be negatively affected by nighttime lighting on the project site. The Skate Park is open until 9:00 p.m. Sunday through Thursday and 10:00 p.m. on Friday and Saturday.

Glare generation occurs from sunlight reflected from the glass and reflective materials utilized on existing commercial and office buildings and from vehicle windows and surfaces. The proposed buildings facades would be clad in low-reflective glass and other low reflective materials (e.g., stone, concrete). Therefore, the facade of the proposed buildings would not contain highly reflective materials. Any glass incorporated into the proposed buildings would be low-reflectivity glass, minimizing the potential for off-site glare. Any glare experienced by surrounding office and commercial buildings would be temporary, changing with the movement of the sun throughout the course of the day and the seasons of the year. Potential glare impacts would be less than significant.

Significance Determination: Potentially Significant.

Mitigation Measures:

A-1: **Comprehensive Lighting Plan.** Prior to issuance of any building permits, the Project Applicant shall prepare a comprehensive lighting plan for review and approval by the City of Lake Forest Director of Development Services or designee. The lighting plan shall be prepared by a qualified engineer and shall be in compliance with applicable standards of the City of Lake Forest Municipal Code. The lighting plan shall address all aspects of lighting, including but not limited to infrastructure and safety. The lighting plan shall include the following in conjunction with other measures, as determined by the illumination engineer:

a. No direct rays or glare are permitted to shine onto public streets or adjacent sites.
b. Light levels at the property line shall not exceed 0.1 footcandle (fc) adjacent to business properties.
c. Parking area lighting shall be Illuminating Engineering Society "Full Cut Off" designated or "fully shielded" fixtures so that no light is emitted above the lowest light-emitting part of the fixture.
d. Light standards shall not exceed 20 feet (ft) in height.

A-2: **Photometric Survey.** Prior to the issuance of any certificates of occupancy, a final photometric survey shall be prepared for approval by the City of Lake Forest Director of Development Services, or designee. The survey shall demonstrate that lighting values do not exceed 0.1 footcandle adjacent to business properties and that no direct rays shine onto public streets or adjacent sites.

Significance Determination After Mitigation: Less than Significant

4.2 Agriculture & Forest Resources *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒
(b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
(c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	☐	☐	☐	☒
(d) Result in the loss of forest land or conversion of forest land to nonforest use?	☐	☐	☐	☒
(e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to nonagricultural use?	☐	☐	☐	☒

Discussion:

a) **No Impact.** As shown in Figure 2.2, the project site is vacant and the surrounding area is characterized by commercial and transportation uses. The project site is not used for agricultural production and is not designated Prime Farmland, Unique Farmland, or Farmland of Statewide Importance on maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency. The proposed project would not convert any type of farmland to a nonagricultural use or contribute to environmental changes that could result in conversion of farmland to nonagricultural use. No impacts to agricultural resources would occur and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

b) **No Impact.** The proposed project site is not used for agricultural production, not zoned for agricultural use, and is not protected by, or eligible for, a Williamson Act contract. No impacts to agricultural resources would occur and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

c) **No Impact.** The proposed project site is presently vacant and is zoned for commercial uses. The project site is not used for timberland production, not zoned as forest land or timberland, and does not contain forest land or timberland. No impacts to agricultural resources would occur and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

d) **No Impact.** The proposed project site is presently vacant. The site is zoned for commercial uses and is surrounded by urban development. Moreover, there are no trees on site. The proposed project would not convert forest land to a nonforest use. Likewise, the proposed project site would not contribute to environmental changes that could result in conversion of forest land to nonforest use. No impacts to forest land or timberland resources would occur and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

e) **No Impact.** The proposed project site is presently zoned for commercial uses and is not used for agricultural production or designated or zoned for agricultural uses. The proposed project would not convert farmland to a nonagricultural use. Likewise, the proposed project site would not contribute to environmental changes that would indirectly result in conversion of farmland to nonagricultural use. No impacts to agricultural resources would occur and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

4.3 Air Quality *Would the project:*		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☐	☒
(b)	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
(c)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is nonattainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
(d)	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
(e)	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Impact Analysis:

a) **No Impact.** An Air Quality Management Plan (AQMP) describes air pollution control strategies to be taken by a city, county, or region classified as a nonattainment area. The main purpose of an AQMP is to bring the area into compliance with federal and State air quality standards. CEQA requires that certain proposed projects be analyzed for consistency with the AQMP. For a project to be consistent with the AQMP adopted by the South Coast Air Quality Management District (SCAQMD), the pollutants emitted from the project should not exceed the SCAQMD daily threshold or cause a significant impact on air quality, or the project must already have been included in the AQMP projections. However, if feasible mitigation measures are implemented and shown to reduce the impact level from significant to less than significant, a project may be deemed consistent with the AQMP.

The proposed project emissions would be below the emissions thresholds established in SCAQMD's CEQA Air Quality Handbook, April 1993 (CEQA Handbook), as shown in Response 4.3.b. Furthermore, the proposed project is consistent with the General Plan designation and zoning of the project site. Adopted General Plans are the basis of the land use projections for the AQMP. The analysis provided in Response 4.3.c also discusses the project's compliance with the AQMP. Therefore, the proposed project would not conflict with the AQMP, and no impact would result with respect to implementation of the AQMP. No mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

b) **Less Than Significant Impact.**

Short-Term (Construction) Emissions. Emissions of pollutants would occur during construction of the proposed project from soil disturbance and equipment exhaust. Major sources of emissions during demolition, grading, and site preparation include: (1) exhaust emissions from construction equipment and vehicles; (2) fugitive dust generated by construction vehicles and equipment traveling over exposed surfaces; (3) demolition activities; and (4) soil disturbances from grading and backfilling.

To evaluate potential impacts related to construction activities, specific criteria are used. The criteria include daily emissions thresholds, compliance with State and national air quality standards, and conformity with the existing State Implementation Plan (SIP) or existing air quality attainment plans. Specific criteria for determining whether the potential air quality impacts of a project are significant are set forth in the SCAQMD CEQA Air Quality Handbook. The following daily thresholds for construction emissions have been established by the SCAQMD and are used in the analysis of air quality impacts for the proposed project.

- 75 pounds per day (lbs/day) of reactive organic compounds (ROC)
- 100 lbs/day of nitrogen oxide (NO_X)
- 550 lbs/day of carbon monoxide (CO)
- 150 lbs/day of particulate matter less than 10 microns in size (PM_{10})
- 55 lbs/day of particulate matter less than 2.5 microns in size ($PM_{2.5}$)
- 150 lbs/day of sulfur oxide (SO_X)

Projects in the South Coast Air Basin (Basin) with construction-related emissions that exceed any of the emission thresholds above are considered potentially significant by the SCAQMD.

In addition to the significance thresholds listed above, SCAQMD also requires analysis of localized air quality impacts. For this project, the appropriate Source Receptor Area (SRA) for Localized Significance Thresholds (LST) is Saddleback Valley (SRA No. 19), according to the SRA/City Table on the SCAQMD LST website.[3]

The project site is located near an existing medical office building. Therefore, the thresholds for a 5 ac site located within 25 meters (m) (82 ft) of the nearest sensitive receptor were applied to the project. The following LST construction thresholds apply for this project:

- 197 lbs/day of NO_X at 25 m
- 1,804 lbs/day of CO at 25 m
- 12 lbs/day of PM_{10} at 25 m
- 8 lbs/day of $PM_{2.5}$ at 25 m

The criteria used in this analysis as thresholds for impact significance are based on the Environmental Checklist questions, as listed above. The following summarizes construction emissions and associated impacts for the project site.

Equipment Exhaust and Related Construction Activities. Construction of each of the project phases will include the following tasks: site preparation, grading, building, and paving. While both the site preparation and grading phases involve heavy-duty diesel-powered equipment and both activities generate large amounts of fugitive dust, the grading phase typically generates greater overall emissions due to the larger equipment needed for earthmoving. Peak daily emissions associated with construction equipment exhaust for the proposed project during each of the construction tasks were calculated using the CalEEMod (Version 2011.1.1) model, are summarized in Table 4.3.A, and detailed in Appendix B. It is assumed that grading would not start until site preparation is finished and that, similarly, building construction would not start until grading is finished. Table 4.3.A shows that by complying with the SCAQMD's standard control measures,

[3] www.aqmd.gov/ceqa/handbook/LST/LST.html.

Table 4.3.A: Peak-Day Construction Emissions (lbs/day) by Task

Construction Phase[1]	CO	VOC	NO_X	SO_2	PM_{10}[2]	$PM_{2.5}$
Site Preparation	9.06	1.88	13.49	0.01	0.99	0.90
Grading	10.37	2.24	14.92	0.02	1.65	1.35
Building Construction	12.43	2.57	18.83	0.02	1.45	1.22
Paving	11.08	2.59	15.46	0.02	1.58	1.32
Architectural Coating	2.10	19.93	3.17	0.00	0.32	0.29
SCAQMD Emissions Threshold	**550**	**75**	**100**	**150**	**150**	**55**
Exceed Significance?	**No**	**No**	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., July 2011.
[1] It is assumed that there is no overlap of these construction tasks.
[2] Total PM_{10} daily emission rate with fugitive dust mitigation measures implemented.
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxide
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
SCAQMD = South Coast Air Quality Management District
SO_2 = sulfur dioxide
VOC = volatile organic compounds

construction equipment/vehicle emissions during construction periods would not exceed any of the SCAQMD established daily emissions thresholds. No mitigation is required.

Fugitive Dust. Blowing dust, combined with engine emissions, produce airborne matter referred to in air quality studies as PM_{10}, $PM_{2.5}$, or fugitive dust. Fugitive dust emissions are generally associated with land clearing, exposure, and cut-and-fill operations. Once construction activities are complete, no further fugitive dust emissions occur. Dust generated daily during construction would vary substantially, depending on the level of activity, the specific operations, and weather conditions. Nearby sensitive receptors and on-site workers may be exposed to blowing dust, depending upon prevailing wind conditions. Fugitive dust would also be generated as construction equipment or trucks travel on unpaved areas of the construction site. The PM_{10} and $PM_{2.5}$ fugitive dust emissions are included in Table 4.3.A.

Since construction operations on site must comply with dust control and other measures prescribed by SCAQMD Rules 402 and 403 to ensure that short-term construction impacts are minimized, compliance with these rules is assumed in Table 4.3.A. Compliance with SCAQMD Rules 402 and 403 would ensure that fugitive dust (PM_{10} and $PM_{2.5}$) generation would be less than significant.

Localized Significance. The following analysis was undertaken consistent with SCAQMD *Final Localized Significance Threshold Methodology* (July 2008). The closest sensitive receptors (i.e., the existing medical offices to the west of the project site) to the various construction phases are located at a distance of less than 25 m (82 ft). However, the SCAQMD recommends that, for sensitive receptors within 25 m of the construction site, the LST be evaluated at 25 m. Thus, LST values for 25 m were used. Table 4.3.B shows the construction-related emissions of CO, NO_X, PM_{10}, and $PM_{2.5}$ compared to the LSTs for Saddleback Valley area at a distance of 25 m.

Table 4.3.B shows that the calculated emissions rates for the proposed on-site construction activities are below the localized significance thresholds for CO, NO_X, PM_{10}, and $PM_{2.5}$. Therefore, the proposed project would not cause any short-term localized air quality impacts, and no mitigation is required.

Table 4.3.B: Summary of On-Site Construction Emissions, Localized Significance by Task

Construction Activity	Emission Rates (lbs/day)			
	CO	**NO_X**	**PM_{10}**	**$PM_{2.5}$**
Site Preparation	8.72	13.45	0.91	0.89
Grading	9.68	14.85	1.49	1.34
Building Construction	10.87	17.66	1.17	1.17
Paving	9.84	15.33	1.30	1.30
Architectural Coating	1.96	3.16	0.29	0.29
Localized Significance Threshold (at 25 m)	**1,804**	**197**	**12**	**8**
Exceed Significance?	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., July 2011.
CO = carbon monoxide
lbs/day = pounds per day
m = meters
NO_X = nitrogen oxide
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size

Long-Term (Operational) Emissions. Long-term air emission impacts are associated with any change in permanent use of the project site by on-site stationary and off-site mobile sources that substantially increase emissions. Stationary source emissions include emissions associated with electricity consumption and natural gas usage. Mobile source emissions would result from vehicle trips associated with the proposed project. The daily operational emissions "significance" thresholds for criteria pollutants with regional effects established by the SCAQMD are as follows:

- 55 lbs/day of ROC
- 55 lbs/day of NO_X
- 550 lbs/day of CO
- 150 lbs/day of PM_{10}
- 55 lbs/day of $PM_{2.5}$
- 150 lbs/day of SO_X

Projects in the Basin with operations-related emissions that exceed any of the emission thresholds are considered potentially significant by the SCAQMD.

In addition to the significance criteria listed above, analysis of localized air quality impacts is also recommended by SCAQMD. For this project, the appropriate SRA for LSTs is Saddleback Valley (SRA No. 19), according to the SRA/City Table on the SCAQMD LST website.[4] The project site is located directly adjacent to an existing medical office building. Therefore, the thresholds for a 5 ac site located within 25 m (82 ft) of the nearest sensitive receptor were applied to the project. The following operational thresholds apply for this project.

- 197 lbs/day of NO_X at 25 m
- 1,804 lbs/day of CO at 25 m

[4] www.aqmd.gov/ceqa/handbook/LST/LST.html.

- 3 lbs/day of PM_{10} at 25 m
- 2 lbs/day of $PM_{2.5}$ at 25 m

Criteria Pollutants with Regional Effects. Based on the traffic analysis prepared for this project, the proposed project would generate 1,301 daily trips. Using the default emission factors included in CalEEMod (Version 2011.1.1), emissions associated with project-related vehicular trips were calculated and are included in Table 4.3.C.

Table 4.3.C: Operational Emissions

Source	Pollutants, lbs/day					
	CO	**ROCs**	**NO_X**	**SO_2**	**PM_{10}**	**$PM_{2.5}$**
2013 Summer Emissions						
Area source emissions	0.00	0.94	0.00	0.00	0.00	0.00
Energy emissions	0.08	0.01	0.09	0.00	0.01	0.01
Operational (vehicle) emissions	62.32	6.16	11.64	0.10	11.99	0.86
Total Summer Emissions	**62.40**	**7.11**	**11.73**	**0.10**	**12.00**	**0.87**
2013 Winter Emissions						
Area source emissions	0.00	0.94	0.00	0.00	0.00	0.00
Energy emissions	0.08	0.01	0.09	0.00	0.01	0.01
Operational (vehicle) emissions	61.49	6.59	12.76	0.10	12.00	0.86
Total Winter Emissions	**61.57**	**7.54**	**12.85**	**0.10**	**12.01**	**0.87**
SCAQMD Threshold	**550**	**55**	**55**	**150**	**150**	**55**
Exceed SCAQMD Threshold?[1]	**No/No**	**No/No**	**No/No**	**No/No**	**No/No**	**No/No**

Source: LSA Associates, Inc., July 2011.
[1] Reporting status for summer/winter scenarios
CO = carbon monoxide
lbs/day = pounds per day
NO_X = nitrogen oxide
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
ROCs = reactive organic compounds
SCAQMD = South Coast Air Quality Management District
SO_2 = sulfur dioxide

As shown in Table 4.3.C, project emissions (both stationary sources and vehicular sources) would not exceed the SCAQMD daily emissions thresholds. Therefore, the long-term air quality impacts of the proposed project are less than significant, and no mitigation measures are required.

Localized Significance. The following analysis was performed per SCAQMD *Final Localized Significance Threshold Methodology* (July 2008). The closest sensitive receptors to the various construction phases are located at a distance within 25 m (82 ft). Thus, LST values for 25 m were used.

Table 4.3.D shows the calculated emissions for the proposed operational activities (fully described above) compared to the LSTs for the Saddleback Valley area at a distance of 25 m. The localized significance analysis only includes on-site sources; therefore, the emissions shown include all stationary and 5 percent of the proposed project's mobile sources.

Table 4.3.D shows that the calculated emissions rates for the proposed operation activities are below the localized significance thresholds for CO, NO_X, PM_{10}, and $PM_{2.5}$. Therefore, the proposed project would not cause any long-term localized air quality impacts, and no mitigation is required.

Table 4.3.D: Summary of Operation Emissions, Localized Significance

	Emission Rates (lbs/day)			
	CO	**NO_X**	**PM_{10}**	**$PM_{2.5}$**
Proposed Project	3.12	1.27	0.60	0.04
Localized Significance Threshold (at 25 m)	**1,804**	**197**	**3**	**2**
Exceed Significance?	**No**	**No**	**No**	**No**

Source: LSA Associates, Inc., July 2011.
CO = carbon monoxide
lbs/day = pounds per day
m = meters
NO_X = nitrogen oxide
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size

CO Hot-Spot Analysis. Local ambient air quality is most affected by CO emissions from motor vehicles. CO is typically the contaminant of greatest concern because it is the pollutant created in greatest abundance by motor vehicles and does not readily disperse into the air. Because CO does not readily disperse into the atmosphere, areas of vehicle congestion create pockets of high CO concentrations called "hot spots." These pockets have the potential to exceed the State 1-hour standard of 20 parts per million (ppm) of CO and/or the 8-hour standard of 9.0 ppm.

The significance of localized project impacts depends on whether ambient CO levels in the vicinity of the project are above or below State and federal CO standards. If ambient levels are below the standards, a project is considered to have a significant impact if project emissions result in an exceedance of one or more of these standards. If ambient levels already exceed a State or federal standard, project emissions are considered significant if they increase 1-hour CO concentrations by 1.0 ppm or more or 8-hour CO concentrations by 0.45 ppm or more.

The primary mobile source pollutant of local concern is CO, which is a direct function of vehicle idling time caused by traffic conditions. CO transport is extremely limited; it disperses rapidly with distance from the source under normal meteorological conditions. Under certain extreme meteorological conditions, CO concentrations proximate to a congested roadway or intersection may reach unhealthy levels affecting local sensitive receptors (residents, school children, the elderly, hospital patients, etc.). Typically, high CO concentrations are associated with roadways or intersections operating at unacceptable LOS or with extremely high traffic volumes. In areas with high ambient CO concentrations, modeling of CO concentrations is recommended in determining a project's effect on local CO levels. Because the proposed project would add only 83 trips to the a.m. and 125 trips to the p.m. peak-hour volumes, would not result in any intersections in the project area operating at a deficient LOS, and would be located within an area with low ambient CO concentrations,[5] no significant CO contributions would occur in the project vicinity. No CO "hot spots" are expected, and modeling of CO emissions is not necessary. Therefore, implementation of the proposed project would not result in substantial adverse air quality impacts associated with CO hot spots, and no mitigation is required.

[5] The background concentrations at the Mission Viejo station are 1.5 ppm and 1.0 ppm for the 1-hr and 8-hr standards, respectively. These concentrations are much lower than the State standards of 20 ppm and 9 ppm.

Significance Determination: Less than Significant.

Mitigation Measure: No mitigation is required.

Significance Determination After Mitigation: Less than Significant

c) **Less Than Significant Impact.** As discussed in Response 4.3.b, no exceedance of SCAQMD criteria pollutant emission thresholds would be anticipated for the proposed project. The projected emissions of criteria pollutants as a result of the proposed project are expected to be below the emissions thresholds established for the region. Cumulative emissions are part of the emission inventory included in the AQMP for the project area. Therefore, there would be no cumulatively considerable net increase of the criteria pollutants that are in nonattainment status in the South Coast Air Basin.

Significance Determination: Less than Significant.

Mitigation Measure: No mitigation is required.

Significance Determination After Mitigation: Less than Significant

d) **Less Than Significant Impact.** As described in Response 4.3.b, the proposed project would not significantly increase long-term emissions within the project area. Construction of the proposed project may expose surrounding sensitive receptors to airborne particulates, as well as a small quantity of construction equipment pollutants (i.e., usually diesel-fueled vehicles and equipment). However, construction contractors would be required to implement measures to reduce or eliminate emissions by following SCAQMD standard construction practices. Therefore, sensitive receptors are not expected to be exposed to substantial pollutant concentrations during construction, and potential short-term impacts are considered less than significant.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

e) **Less Than Significant Impact.** Some objectionable odors may emanate from operation of diesel-powered construction equipment during construction of the project. These odors, however, would be limited to the site only during the construction period and therefore would not be considered a significant impact. Project operation would not result in objectionable odors as medical office buildings are not known to emit odors. No mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

4.4 Biological Resources *Would the project:*		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☒	☐
(b)	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	☐	☐	☐	☒
(c)	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
(d)	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☒	☐	☐
(e)	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
(f)	Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	☐	☐	☐	☒

Discussion:

a) **Less than Significant.** The proposed project site is currently vacant. The site has been subject to previous mass grading and is entirely surrounded by urban developed areas. A site visit was conducted by LSA Biologist Chris Meloni on June 8, 2011. The purpose of the site visit was to (1) document the presence/absence of any biological resources (i.e., species or habitats) of interest or concern, and (2) to determine if there is the potential for biological resources of interest or concern to be present on site (even if such resources were not detected during the fieldwork). A list of plant species observed during the site visit is included in Appendix C of this IS/MND. The only wildlife species observed on site were desert cottontail (*Sylvilagus audubonii*) and Botta's pocket gopher (*Thomomys bottae*).

Vegetation observed on site is comprised of the typical nonnative ruderal grassland species associated with previously disturbed sites. The site appears to be regularly maintained for vegetation control, presumably by mowing. The vegetation on site is primarily less than 6 inches in height, and there are no species on site that exceed 18 inches in height. Ornamental landscaping is present along the site perimeter immediately to the east and west. This ornamental landscaping is associated with off-site development and would be not be disturbed by project development. Although some native plant species associated with scrub or wetland habitats are present, they are present as scattered individuals and do not provide scrub or wetland habitat. There is a small area of scrub habitat adjacent to the project site to the south (between the project site and the SR-241 northbound on-ramp) that is not expected to be disturbed by implementation of the proposed project.

Although none were observed, it is possible that raptors (e.g., hawks) may occasionally forage on site. However, implementation of the proposed project would not result in significant adverse impacts to raptors, as none were observed on site or found to be nesting on site. In addition, large tracts of land supporting raptor foraging habitat have been set aside in the vicinity of the project site. These areas include, but are not limited to, Limestone Canyon and Whiting Ranch Wilderness Parks, which

encompass approximately 4,300 ac, and the Cleveland National Forest, which encompasses approximately 460,000 ac of riparian and oak woodland canyons, rolling grassland, hills, and steep slopes of coastal sage scrub (CSS) and chaparral. When viewed in the context of how much raptor foraging habitat has already been conserved in Orange County and in the project vicinity, the quantity of raptor foraging habitat lost on site is not substantial.

In summary, no special-status species were observed during the site visit. The loss of disturbed, mostly nonnative habitat and the associated reduction of locally common wildlife populations are not considered significant impacts. The removal of on-site vegetation is not expected to have a significant adverse effect on candidate, sensitive, or special-status species, as defined by the California Department of Fish and Game (CDFG) or the United States Fish and Wildlife Service (USFWS). Therefore, any impacts to sensitive or special-status species would be less than significant, and no mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

b) **No Impact.** The proposed project site is currently vacant. The project site does not contain any riparian habitat or sensitive natural communities identified in local or regional plans, policies, or regulations or by the CDFG or the USFWS. No impacts related to riparian habitat or other sensitive natural communities identified in local or regional plans would result from project implementation, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

c) **No Impact.** The site has been previously graded and does not contain any natural hydrologic features or federally protected wetlands as defined by Section 404 of the Clean Water Act; neither does the project vicinity. There is a small desilting basin in the northeast corner of the site, however, this basin would not be subject to United States Army Corps of Engineers (Corps) jurisdiction because treatment ponds designed to meet the requirements of the Clean Water Act are specifically excluded from Corps jurisdiction (CFR 328.3). Therefore, no direct removal, filling, or hydrological interruption of a wetland area would occur with development of the project site. No impact would occur, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

d) **Less than Significant with Mitigation Incorporated.** The project site is bordered to the north, east, and west by urban development. In addition, the northbound Lake Forest Drive on-ramp to SR-241 is located to the south of the project site, with SR-241 located farther south. There is a small area of scrub habitat bordering the project site to the south (between the project site and the on-ramp); however, this area of

scrub is completely surrounded by urban development and is not anticipated to be disturbed by implementation of the proposed project. Because of the isolation of this site amidst urban development, the proposed project site does not function as a wildlife movement corridor. Those species observed on site are either able to fly in or are able to navigate on the ground through long stretches of urban development. Therefore, the project site does not contain any native resident or migratory fish, wildlife species, or wildlife corridors. As a result, no impacts are anticipated.

The existing ruderal grassland habitat within the project site may, however, provide suitable habitat for nesting birds. While no nesting birds were observed on site during the time of the assessment, and the likelihood of nesting birds occurring on site is very low considering the poor quality of the existing ruderal grassland habitat and the general lack of trees on site, there are existing trees located adjacent to the project site to the northeast along Lake Forest Drive and Towne Centre Drive that may provide habitat for nesting birds. Therefore, implementation of the proposed project would be subject to the provisions of the Migratory Bird Treaty Act (MBTA), which prohibits disturbing or destroying active nests. In addition, nests and eggs are protected under Fish and Game Code Section 3503. Project implementation must be accomplished in a manner that avoids impacts to active nests during the breeding season. As such, the project is required to comply with the federal MBTA. As documented in Mitigation Measure B-1 (compliance with the MBTA), avoiding impacts can be accomplished through a variety of means, including restricting brush and tree removal to periods (August 15–February 15) outside the avian nesting season or through performance of nesting bird surveys prior to clearing when clearing occurs during the nesting season. With implementation of Mitigation Measure B-1, potentially significant impacts to nesting birds would be reduced to a level considered less than significant.

Significance Determination: Potentially Significant

Mitigation Measure:

B-1 **Migratory Bird Treaty Act.** In the event that project construction or grading activities should occur within the active breeding season for birds (i.e., February 15–August 15), a nesting bird survey shall be conducted by a qualified biologist prior to commencement of construction activities. If active nesting of birds is observed within 100 feet (ft) of the designated construction area prior to construction, the construction crew shall establish an appropriate buffer around the active nest. The designated project biologist shall determine the buffer distance based on the specific nesting bird species and circumstances involved. Once the project biologist verifies that the birds have fledged from the nest, the buffer may be removed. Prior to commencement of grading activities and issuance of any building permits, the City of Lake Forest Director of Development Services, or designee, shall verify that all project grading and construction plans include specific documentation regarding the requirements of the Migratory Bird Treaty Act (MBTA), that preconstruction surveys have been completed and the results reviewed by staff, and that the appropriate buffers (if needed) are noted on the plans and established in the field with orange snow fencing.

Significance Determination After Mitigation: Less than Significant

e) **No Impact.** The City currently requires that a Eucalyptus Tree Cutting Permit be obtained prior to cutting, pruning, or removing any eucalyptus trees during the restricted period (April 1–October 31). There are no eucalyptus trees located on the proposed project site and no eucalyptus trees would be cut, pruned, or removed as part of project implementation. Therefore, the proposed project would not conflict with the provisions of the Eucalyptus Tree Cutting regulations. The proposed project would not result in

an impact related to local policies or ordinances protecting biological resources, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

f) **No Impact.** The preparation of a comprehensive natural resources management conservation plan for Central and Coastal Orange County was completed in 1996. The Central and Coastal Orange County Natural Community Conservation Plan and Habitat Conservation Plan (NCCP/HCP) and the associated Implementation Agreement cover 13 cities, including Lake Forest. The purpose of the NCCP/HCP is to create a multispecies multihabitat reserve system and to implement a long-term management program that will protect primarily CSS and the species that utilize this habitat. At the same time that it protects this habitat and species, the NCCP/HCP is also intended to allow for economical use of the lands that meet people's needs.

Under the NCCP/HCP, it was determined that the reserve design was sufficiently large and diverse and incorporated sufficient connectivity for purposes of wildlife movement. The NCCP Reserve design process focused on habitat contiguity and connectivity and the maintenance of wildlife dispersal and genetic flow for target species and other species integral to ecosystem diversity.

The reserve system covers over 37,000 ac of CSS, grasslands, riparian, chaparral, woodland, and forest habitats. This system extends into the City and includes, but is not limited to, the Whiting Ranch Wilderness Park. Activities within the reserve system are bounded by the allowable practices within the NCCP/HCP.

The project site is currently vacant and is surrounded by urban development. While the project site is located within the planning area of the NCCP/HCP, the project site is not located within the reserve system. The proposed project site is in an area identified in the NCCP/HCP as urbanized and is located in an area designated for development. Therefore, the project would be consistent with the NCCP/HCP, and no impacts would result.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

4.5 Cultural Resources *Would the project:*		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	☐	☐	☐	☒
(b)	Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	☐	☒	☐	☐
(c)	Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	☐	☒	☐	☐
(d)	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☒	☐	☐

Discussion:

a) **No Impact.** CEQA defines a "historical resource" as a resource that meets one or more of the following criteria: (1) listed in, or determined eligible for listing in, the California Register of Historical Resources (California Register); (2) listed in a local register of historical resources as defined in Public Resources Code (PRC) Section 5020.1(k); (3) identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g); or (4) determined to be a historical resource by a project's Lead Agency (PRC Section 21084.1 and *State CEQA Guidelines* Section 15064.5(a)). The project site is currently vacant and has been subject to previous mass grading; there are no historical resources present on site. In addition, based on the age of the surrounding development, none of the adjacent structures would be eligible for listing in the California Register, and none are listed in a local register of historic places, identified, or determined to be a historic resource by the City. Therefore, the proposed project would not cause a substantial adverse change in the significance of a historical resource, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

b) **Less than Significant with Mitigation Incorporated.** As stated above, the project site is currently vacant and has been subject to previous mass grading. As a result, the potential for previous unknown subsurface archaeological resources to be encountered during site preparation activities is remote. Further, the proposed project site is not located in an area of the City that has been identified as being sensitive for archeological resources (refer to Figure RR-6 in the Recreation and Resources Element of the City's General Plan). Nevertheless, the project area has not been recently surveyed, and the project includes site trenching and excavation that may uncover unknown (buried) archaeological resources. Therefore, Mitigation Measure C-1 requires the project applicant to retain a qualified archaeologist to assess any archaeological resources found on site and advise the applicant and the City as to the proper treatment of the find in compliance with State law. With implementation of Mitigation Measure C-1, which requires archaeological monitoring and proper treatment of any archaeological find, impacts to archaeological resources would be less than significant.

Significance Determination: Potentially Significant

Mitigation Measure:

C-1 **Archaeological Resources.** Prior to the issuance of a grading permit, the applicant shall provide a letter to the City of Lake Forest (City) Director of Development Services, or designee, from an archaeologist. The letter shall state that the applicant has retained this individual, that the archaeologist shall be present at the pre-grading conference, and that the archaeologist shall monitor all grading and other significant ground-disturbing activities. The consultant shall be selected from the roll of qualified archaeologists maintained by the County of Orange. The archaeologist shall be present at the pre-grading conference to establish procedures for archaeological resource surveillance.

At a minimum, the procedures shall include (1) a list of personnel involved in the monitoring activities; (2) a description of frequency of monitoring (e.g., full-time, part-time, spot checking); (3) a description of what resources may be encountered; (4) a description of circumstances that would result in the halting of work at the project site (e.g., what is considered a "significant" archaeological site); (5) provisions for temporarily halting or redirecting work to permit sampling, identification, and evaluation of resources deemed by the archaeologist to potentially be unique archaeological resources under the California Environmental Quality Act (CEQA); and (6) a description of monitoring reporting procedures. These procedures shall be reviewed and approved by the Director of Development Services, or designee, prior to issuance of the grading permit and prior to any surface disturbance on site.

If any significant historical resources, archaeological resources, or human remains are found during monitoring, work should stop within the immediate vicinity (precise area to be determined by the archaeologist in the field) of the resource until such time as the resource can be evaluated by an archaeologist and any other appropriate individuals. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. Artifacts recovered shall be prepared, identified, and cataloged before donation to the accredited repository designated by the City. State of California Guidelines for the Curation of Archaeological Collections shall be consulted regarding the treatment of recovered artifacts. Any artifacts determined to be insignificant shall be offered to local schools for use in educational programs. Disposition of the resources shall be within the discretion of the City of Lake Forest.

Upon completion of all monitoring/mitigation activities, the consulting archaeologist shall submit a final report to the City Director of Development Services, or designee, and the South Central Coastal Information Center. The report shall include a list of specimens recovered, documentation of each locality, interpretation of artifacts recovered and shall include all specialists' reports as appendixes. The monitoring report shall be prepared consistent with the guidelines of the Office of Historic Preservation's Archaeological Resources Management Reports (ARMR): Recommended Contents and Format.

Significance Determination After Mitigation: Less than Significant

c) **Less than Significant with Mitigation Incorporated.** As stated above, the project site is currently vacant and has been subject to previous mass grading. The project is, however, located in an area that is considered to be sensitive for paleontological resources. The ancient geological formations have yielded and still contain paleontological resources of major significance. Grading to a depth of approximately 7 ft is required for project implementation and may affect unknown buried paleontological resources. Therefore, there is a potential for significant fossil remains to be encountered during grading activities. Mitigation Measure C-2 requires a qualified paleontologist to be retained to monitor grading activities. Any collected specimens would be prepared, identified, cataloged, and donated to an accredited

repository. Implementation of Mitigation Measure C-2 would ensure that impacts to paleontological resources are reduced to below a less than significant level.

Significance Determination: Potentially Significant

Mitigation Measure:

C-2: **Paleontological Resources Impact Mitigation Program**. Prior to commencement of any grading activity on site, the City of Lake Forest Director of Development Services, or designee, shall verify that a paleontologist, who is listed on the County of Orange list of certified paleontologists, has been retained by the project applicant and shall be on site during all rough grading and other significant ground-disturbing activities in native soils. A paleontologist shall not be required on site if excavation is only occurring in artificial fill.

The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed project. The PRIMP should be consistent with the guidelines of the Society of Vertebrate Paleontologists (SVP) (1995) and shall include but not be limited to the following:

- Attendance at the pre-grade conference in order to explain the mitigation measures associated with the project.
- During construction excavation, a qualified vertebrate paleontological monitor shall initially be present on a full-time basis whenever excavation shall occur within the sediments that have a high paleontological sensitivity rating and on a spot-check basis in sediments that have a low sensitivity rating. Based on the significance of any recovered specimens, the qualified paleontologist may set up conditions that shall allow for monitoring to be scaled back to part-time as the project progresses. However, if significant fossils begin to be recovered after monitoring has been scaled back, conditions shall also be specified that would allow increased monitoring as necessary. The monitor shall be equipped to salvage fossils and/or matrix samples as they are unearthed in order to avoid construction delays. The monitor shall be empowered to temporarily halt or divert equipment in the area of the find in order to allow removal of abundant or large specimens.
- The underlying sediments may contain abundant fossil remains that can only be recovered by a screening and picking matrix; therefore, these sediments shall be occasionally be spot-screened through one-eighth to one-twentieth-inch mesh screens to determine whether microfossils exist. If microfossils are encountered, additional sediment samples (up to 6,000 pounds) shall be collected and processed through one-twentieth-inch mesh screens to recover additional fossils. Processing of large bulk samples is best accomplished at a designated location within the project that shall be accessible throughout the project duration but shall also be away from any proposed cut or fill areas. Processing is usually completed concurrently with construction, with the intent to have all processing completed before, or just after, project completion. A small corner of a staging or equipment parking area is an ideal location. If water is not available, the location should be accessible for a water truck to occasionally fill containers with water.
- Preparation of recovered specimens to a point of identification and permanent preservation. This includes the washing and picking of mass samples to recover small invertebrate and vertebrate fossils and the removal of surplus sediment from around larger specimens to reduce the volume of storage for the repository and the storage cost for the developer.
- Identification and curation of specimens into a museum repository with permanent retrievable storage, such as the Natural History Museum of Los Angeles County (LACM).

- Preparation of a report of findings with an appended itemized inventory of specimens. When submitted to the City of Lake Forest Director of Development Services, or designee, the report and inventory would signify completion of the program to mitigate impacts to paleontological resources.

Significance Determination After Mitigation: Less than Significant

d) **Less than Significant with Mitigation Incorporated.** No known human remains are present on site, and there are no facts or evidence to support the idea that Native Americans or people of European decent are buried on site. However, ground-disturbing activities associated with the project have the potential to disturb previously unknown human remains. In the unlikely event that human remains are encountered during project grading, the proper authorities would be notified, and standard procedures for the respectful handling of human remains during earthmoving activities would be adhered to as specified in Mitigation Measure C-3. Implementation of Mitigation Measure C-3 would reduce potential project impacts related to the discovery of human remains on site to a less than significant level.

Significance Determination: Potentially Significant

Mitigation Measure:

C-3 Consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e), if human remains are encountered, work within 25 feet (ft) of the discovery shall be redirected and the County Coroner notified immediately. State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Orange County (County) Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which shall determine and notify a most likely descendant (MLD). With the permission of the City of Lake Forest (City), the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City shall consult with the MLD as identified by the NAHC to develop an agreement for treatment and disposition of the remains.

Upon completion of the assessment, the consulting archaeologist shall prepare a report documenting the methods and results and provide recommendations regarding the treatment of the human remains and any associated cultural materials, as appropriate, and in coordination with the recommendations of the MLD. The report should be submitted to the City's Director of Development Services, or designee, and the South Central Coastal Information Center. The City's Director of Development Services, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of findings and recommendations.

Significance Determination After Mitigation: Less than Significant

4.6 Geology and Soils *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
ii) Strong seismic ground shaking?	☐	☒	☐	☐
iii) Seismic-related ground failure, including liquefaction?	☐	☐	☒	☐
iv) Landslides?	☐	☒	☐	☐
(b) Result in substantial soil erosion or the loss of topsoil?	☐	☒	☐	☐
(c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	☐	☐	☒	☐
(d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	☐	☐	☐	☒
(e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	☐	☐	☐	☒

Discussion:

a)

i) **No Impact.** As with all of Southern California, the project site is subject to strong ground motion resulting from earthquakes on nearby faults. Nonetheless, according to the *Geotechnical Report-Kaiser Foothill Ranch Medical Office Building* (Geobase, Inc., May 2011), there are no known active faults crossing the site. In addition, the site does not lie within the boundaries of an "Earthquake Fault Zone" as defined by the State of California in the Alquist-Priolo Earthquake Fault Zoning Act. Therefore, the proposed project site would not be subject to impacts related to rupture of a known earthquake fault as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

ii) **Less Than Significant with Mitigation Incorporated.** The proposed project site, and all of Southern California, is located in an active seismic region. Ground shaking resulting from earthquakes associated with both nearby and more distant faults is likely to occur. During the life of the project, seismic activity associated with active faults in the area may generate moderate to strong shaking on site. Based on the findings of the *Geotechnical Report-Kaiser Foothill Ranch Medical Office Building* (Geobase, Inc., May 2011), the average peak ground acceleration (PGA) for the project site is 0.558 g (acceleration due to gravity). Therefore, ground shaking generated by fault movement is considered a potentially significant impact that may potentially affect the proposed project. All applicable guidelines, including compliance with the California Building Code (CBC), accepted industry standards, and other regional and local

regulations that address seismic hazards, are incorporated into project building plans. Compliance with standard State and local building code requirements and Mitigation Measure G-1 would result in potential project impacts related to seismic ground shaking being reduced to levels considered to be less than significant.

Significance Determination: Potentially Significant

Mitigation Measure:

G-1 **Geotechnical Requirements and Seismic Design Standards.** All grading operations and construction shall be conducted in accordance with governing building codes and in conformance with the recommendations included in the geotechnical report on the proposed project site titled *Geotechnical Report-Kaiser Foothill Ranch Medical Office Building* (Geobase, Inc., May 2011) (included in Appendix D of this Initial Study/Mitigated Negative Declaration [IS/MND]). Unless superseded by other regulatory provisions or standards, seismic design criteria shall be developed on the basis of the requirements of the City of Lake Forest (City) Building Code. Prior to issuance of building permits, the City's Building Official, or designee, shall review and approve final design plans and the recommendations of the project geotechnical consultant as summarized in a final written report.

Significance Determination After Mitigation: Less than Significant

iii) **Less than Significant.** Liquefaction commonly occurs when three conditions are present simultaneously: (1) high groundwater; (2) relatively loose, cohesionless (sandy) soil; and (3) earthquake-generated seismic waves. The presence of these conditions may cause a loss of shear strength and, in many cases, ground settlement. Seismically induced liquefaction and settlement were investigated as part of the *Geotechnical Report-Kaiser Foothill Ranch Medical Office Building* (Geobase, Inc., May 2011). According to the United States Geological Survey (USGS)/California Geological Survey (CGS) Seismic Hazard Zones Map, the proposed project site is not located within an area subject to liquefaction. Further, the underlying bedrock and density of the fill indicate that the subsoils at the site do not possess a potential for liquefaction. Further, seismically induced ground settlement would not exceed 0.5 inch under a peak ground acceleration of 0.38 g, and associated differential settlements are not anticipated to exceed three-tenths of one inch over a distance of 30 ft. Therefore, the potential for seismic-related ground failure, including liquefaction, is less than significant, and no mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

iv) **Less than Significant with Mitigation Incorporated.** While seismically induced landslides and other slope failures are common occurrences during or soon after earthquakes in areas with significant ground slopes, the proposed project site has been previously graded and is relatively flat. Based on the findings of the *Geotechnical Report-Kaiser Foothill Ranch Medical Office Building* (Geobase, Inc., May 2011), no existing landslides are present on or adjacent to the property. In addition, the site lies far enough from the nearest significant upland slopes to preclude the hazards of induced landsliding. The potential for seismically induced landsliding to occur at the site is not significant, and no mitigation is required.

The potential for future slope instability would be limited to proposed cut-and-fill slopes that would be manufactured as part of the proposed grading operations. All grading operations and construction would be conducted in conformance with applicable City grading regulations and the City's building code. Compliance with applicable local and State regulations, as required in Mitigation Measure G-1 would reduce potential project impacts related to potential slope failure to a less than significant level.

Significance Determination: Potentially Significant

Mitigation Measures: Refer to Mitigation Measure G-1

Significance Determination After Mitigation: Less than Significant

b) **Less than Significant with Mitigation Incorporated.** During construction activities, soil would be exposed, and there would be an increased potential for soil erosion compared to existing conditions. Additionally, during a storm event, soil erosion could occur at an accelerated rate. The increased erosion potential could result in short-term water quality impacts as identified in Section 4.9, Hydrology and Water Quality. Under the Construction General Permit, a Stormwater Pollution Prevention Program (SWPPP) and construction Best Management Practices (BMPs) detailed in the SWPPP would be required during construction activities. Construction BMPs would include Erosion Control BMPs designed to minimize erosion. With incorporation of Erosion Control BMPs, as required by Mitigation Measures WQ-1 and WQ-2, impacts related to erosion during construction would be less than significant. No additional mitigation is required.

Operation of the proposed project would result in a slight alteration of the existing on-site drainage patterns due to construction of the medical office building and parking lot. In the proposed condition for Phase 1, 2.5 ac of the site would be impervious surface areas and not prone to erosion or siltation. The remaining 3.4 ac of the site would be landscaping and the bio-retention basins, which would collect and treat runoff and minimize erosion and siltation. As a result of the increase in impervious surface area, the proposed project would increase peak flow and volume of runoff from the site. However, implementation of Mitigation Measures WQ-4 and WQ-5 would require BMPs to be designed to ensure that peak flow and the volume of storm water runoff from the site are not increased compared to existing conditions.

Therefore, with implementation of Mitigation Measures WQ-1, WQ-2, WQ-4, and WQ-5, the proposed project would not result in substantial soil erosion or the loss of topsoil.

Significance Determination: Potentially Significant

Mitigation Measures: Refer to Mitigation Measures WQ-1, WQ-2, WQ-4, and WQ-5

Significance Determination After Mitigation: Less than Significant

c) **Less than Significant.** As previously stated, the proposed project site is relatively flat. There are no existing landslides on or adjacent to the project site, and the potential for seismically induced landsliding to occur at the site is considered to be less than significant. No mitigation is required.

Seismically induced lateral spreading involves lateral movement of earth materials due to ground shaking. Lateral spreading is generally caused by liquefaction of soils with gentle slopes. Since the property is relatively flat and the potential for liquefaction to occur on site is considered very low, the risk of lateral spreading is considered less than significant, and no mitigation is required.

Similarly, according to the *Geotechnical Report-Kaiser Foothill Ranch Medical Office Building* (Geobase, Inc., May 2011), the proposed project site is not located within an area of known subsidence, and the potential for earthquake-induced settlement is low. No mitigation is required.

Therefore, for the reasons listed above, the potential for on- or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse is less than significant, and no mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

d) **No Impact.** Expansive soils contain types of clay minerals that occupy considerably more volume when they are wet or hydrated than when they are dry or dehydrated. Volume changes associated with changes in the moisture content of near-surface expansive soils can cause uplift or heave of the ground when they become wet or, less commonly, cause settlement when they dry out. According to the *Geotechnical Report-Kaiser Foothill Ranch Medical Office Building* (Geobase, Inc., May 2011), the on-site soils on site have a very low expansion potential. Therefore, implementation of the proposed project would not result in an impact with respect to expansive soils, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

e) **No Impact.** The proposed project does not include construction of or connections to septic tanks or alternative waste water disposal systems. Therefore, the project would not result in impacts related to the soil capability to adequately support the use of septic tanks or alternative wastewater disposal systems, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

4.7 Greenhouse Gas Emissions *Would the project:*		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	☐	☐	☒	☐
(b)	Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion:

The following response applies to Questions 4.7.a and 4.7.b.

a-b) **Less Than Significant Impact.** Global climate change (GCC) is the observed increase in the average temperature of the Earth's atmosphere and oceans along with other significant changes in climate (such as precipitation or wind) that last for an extended period of time. The term "global climate change" is often used interchangeably with the term "global warming," but "global climate change" is preferred to "global warming" because it helps convey that there are other changes in addition to rising temperatures.

The prevailing scientific opinion on climate change is that "most of the warming observed over the last 50 years is attributable to human activities."[6] Increased amounts of carbon dioxide (CO_2) and other greenhouse gases (GHGs) are the primary causes of the human-induced component of warming. The observed warming effect associated with the presence of GHGs in the atmosphere (from either natural or human sources) is often referred to as the greenhouse effect.[7]

GHGs are present in the atmosphere naturally, are released by natural sources, or are formed from secondary reactions taking place in the atmosphere. The gases that are widely seen as the principal contributors to human-induced GCC are:[8]

- CO_2
- Methane (CH_4)
- Nitrous oxide (N_2O)
- Hydrofluorocarbons (HFCs)
- Perfluorocarbons (PFCs)
- Sulfur hexafluoride (SF_6)

In June 2005, Governor Schwarzenegger established California's GHG emissions reduction targets in Executive Order (EO) S-3-05. The EO established the following goals for the State of California: GHG emissions were to be reduced to 2000 levels by 2010; GHG emissions should be reduced to 1990 levels by 2020; and GHG emissions should be reduced to 80 percent below 1990 levels by 2050.

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6 Intergovernmental Panel on Climate Change (IPCC), *Climate Change 2007: Working Group I: The Physical Science Basis*. http://www.ipcc.ch/publications_and_data/ar4/wg1/en/contents.html. Accessed July 26, 2011

7 The temperature on Earth is regulated by a system commonly known as the "greenhouse effect." Just as the glass in a greenhouse lets heat from sunlight in and reduces the amount of heat that escapes, greenhouse gases like carbon dioxide, methane, and nitrous oxide in the atmosphere keep the Earth at a relatively even temperature. Without the greenhouse effect, the Earth would be a frozen globe; thus, although an excess of greenhouse gas results in global warming, the *naturally occurring* greenhouse effect is necessary to keep our planet at a comfortable temperature.

8 The greenhouse gases listed are consistent with the definition in Assembly Bill 32 (Government Code 38505), as discussed later in this section.

California's major initiative for reducing GHG emissions is outlined in Assembly Bill (AB) 32, the "Global Warming Solutions Act," passed by the California State legislature on August 31, 2006. AB 32 requires the California Air Resources Board (ARB) to:

- Establish a statewide GHG emissions cap for 2020, based on 1990 emissions, by January 1, 2008;
- Adopt mandatory reporting rules for significant sources of GHG emissions by January 1, 2008;
- Adopt an emissions reduction plan by January 1, 2009, indicating how emissions reductions will be achieved via regulations, market mechanisms, and other actions; and
- Adopt regulations to achieve the maximum technologically feasible and cost-effective reduction of GHGs by January 1, 2011.

To assist public agencies in the mitigation of GHG emissions or analyzing the effects of GHGs under CEQA, including the effects associated with transportation and energy consumption, Senate Bill (SB) 97 (Chapter 185, 2007) required the Governor's Office of Planning and Research (OPR) to develop CEQA guidelines on how to minimize and mitigate a project's GHG emissions. OPR was required to prepare, develop, and transmit these guidelines on or before July 1, 2009, and the Resources Agency was required to certify and adopt them by January 1, 2010. On January 8, 2009, OPR released preliminary draft CEQA guideline amendments. The Natural Resources Agency adopted the CEQA Guidelines Amendments and transmitted them to the Office of Administrative Law (OAL) on December 31, 2009. On February 16, 2010, the OAL approved the Amendments and filed them with the Secretary of State for inclusion in the California Code of Regulations. The Amendments became effective on March 18, 2010. The Amendments encourage Lead Agencies to consider many factors in conducting a CEQA analysis, but preserve the discretion granted by CEQA to Lead Agencies in making their determinations.

State CEQA Guidelines Section 15064.4 states:

> (a) The determination of the significance of greenhouse gas emissions calls for a careful judgment by the lead agency consistent with the provisions in section 15064. A lead agency should make a good-faith effort, based on available information, to describe, calculate or estimate the amount of greenhouse gas emissions resulting from a project. A lead agency shall have discretion to determine, in the context of a particular project, whether to:
>
> > (1) Use a model or methodology to quantify greenhouse gas emissions resulting from a project, and which model or methodology to use. The lead agency has discretion to select the model it considers most appropriate provided it supports its decision with substantial evidence. The lead agency should explain the limitations of the particular model or methodology selected for use; or
> >
> > (2) Rely on a qualitative analysis or performance based standards.
>
> (b) A lead agency may consider the following when assessing the significance of impacts from greenhouse gas emissions on the environment:
>
> > (1) The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
> >
> > (2) Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

> (3) The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

State CEQA Guidelines Section 15064(b) provides that the "determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data," and further states that an "ironclad definition of significant effect is not always possible because the significance of an activity may vary with the setting."

As such, currently neither the CEQA statutes, OPR guidelines, nor the *State CEQA Guidelines* prescribe specific quantitative thresholds of significance or a particular methodology for performing an impact analysis. As with most environmental topics, significance criteria are left to the judgment and discretion of the Lead Agency.

The recommended approach for GHG analysis included in the Governor's OPR June 2008 Technical Advisory (TA) is to: (1) identify and quantify GHG emissions, (2) assess the significance of the impact on climate change, and (3) if significant, identify alternatives and/or mitigation measures to reduce the impact below significance.[9] The June 2008 OPR guidance provides some additional direction regarding planning documents as follows: "CEQA can be a more effective tool for GHG emissions analysis and mitigation if it is supported and supplemented by sound development policies and practices that will reduce GHG emissions on a broad planning scale and that can provide the basis for a programmatic approach to project-specific CEQA analysis and mitigation. For local government Lead Agencies, adoption of general plan policies and certification of general plan EIRs that analyze broad jurisdiction-wide impacts of GHG emissions can be part of an effective strategy for addressing cumulative impacts and for streamlining later project-specific CEQA reviews."

As part of the process of developing the *State CEQA Guidelines* pertaining to GHG emissions analysis, OPR asked ARB technical staff to recommend statewide interim thresholds of significance for GHGs. The ARB released a preliminary draft staff proposal in October 2008 that included initial suggestions for significance criteria related to industrial, commercial, and residential projects. Although the ARB anticipated adopting the significance criteria in 2009 to allow coordination with OPR's efforts on GCC, no formal announcement of adoption has been made.[10] While in draft form, the ARB's *Recommended Approaches for Setting Interim Thresholds for Greenhouse Gases Under the California Environmental Quality Act* does provide some assistance to the City in evaluating whether this project would impede the State's mandatory requirements under AB 32 to reduce statewide GHG emissions to 1990 levels by 2020.

The Guidance does not specifically identify medical office projects, but does generally describe three classes of common projects: industrial, commercial, and residential projects. For each type of project, the Guidance recommends that a two-pronged threshold be employed, one performance-based and one

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9 State of California, 2008. Governor's Office of Planning and Research. *CEQA and Climate Change: Addressing Climate Change Through California Environmental Quality Act Review*. June 19.

10 California, State of, 2008. California Air Resources Board (ARB). *Preliminary Draft Staff Proposal: Recommended Approaches for Setting Interim Thresholds for Greenhouse Gases Under the California Environmental Quality Act*. October 24.

numerical. For performance standards, the draft guidance suggests that operation and construction of the project be evaluated for their consistency with applicable performance standards contained in plans designed to reduce GHG emissions and/or help meet the State's emission reduction objectives in AB 32. The Guidance contains two numerical standards that will guide the City's analysis of the impacts of this project to a degree. First, the Guidance states that some small residential and commercial projects, emitting 1,600 metric tons of carbon dioxide equivalent (CO_2e) per year or less, would clearly not interfere with achieving the State's emission reduction objectives in AB 32 (and EO S-03-05) and thus may be deemed categorically exempt from CEQA. The Guidance does not state or imply that projects emitting more than 1,600 metric tons of CO_2e per year will necessarily result in a significant impact, although at this point the Guidance has no precise numerical threshold for commercial and residential projects. For industrial projects, the Guidance proposes that projects that emit less than 7,000 metric tons of CO_2e per year may be considered less than significant, recognizing that AB 32 will continue to reduce or mitigate emissions from these sorts of projects over time.

While some policy makers and regulators suggest that a zero emissions threshold would be appropriate when evaluating GHGs and their potential effect on climate change, such a rule appears inconsistent with the State's approach to mitigation of climate change impacts. AB 32 does not prohibit all new GHG emissions; rather, it requires a reduction in statewide emissions to a given level. Thus, AB 32 recognizes that GHG emissions will continue to occur and that increases will result from certain activities, but that emissions reductions must be achieved overall. Moreover, if all economic development were to cease, the State would very likely be unable to fund the very measures that are needed to combat climate change.

This analyzes whether the project's emissions should be considered significant. The proposed project may result in a significant GCC impact if it would impede achievement of the State's mandatory requirement under AB 32 to reduce statewide GHG emissions to 1990 levels by 2020. To determine whether the project would impede achievement of the State's mandatory requirement under AB 32 to reduce statewide GHG emissions to 1990 levels by 2020, the analysis relies on the draft significance criteria proposed by the ARB.

Until appropriate regulatory entities develop CEQA thresholds for GHGs for projects emitting more than 1,600 metric tons of CO_2e per year, interim standards based on the existing draft significance criteria proposed by ARB should be applied. For residential and commercial projects, the project's consistency with performance standards set out in City policies that promote sustainability and reduce emissions, as well as State policies and strategies designed to meet the State's emission reduction objectives in AB 32,[11] will be evaluated, and the project emissions will also be evaluated numerically. Until further guidance is provided by the State or other appropriate expert agencies, a conservative standard that falls somewhat below the State's proposed threshold for industrial projects, which is 7,000 metric tons of CO_2e per year, will be applied.

Until more guidance is provided from the expert agencies, for the purposes of the analysis of the proposed project, the City considers emissions of 1,600 metric tons of CO_2e per year or less to be less than significant. If the project exceeds the screening threshold of 1,600 metric tons of CO_2e per year, the proposed project will be considered to have a significant impact if it either (1) is not substantially consistent with policies and standards set out in federal, State, and local plans designed to reduce GHG emissions, or (2) would emit more than 7,000 metric tons of CO_2e per year. Therefore, if the project is not substantially consistent with policies and standards set out in federal, State, and local plans designed

[11] These interim standards are consistent with the general guidance on cumulative impacts analysis. For instance, Section 15064(h)(3) of the proposed amendment to the *CEQA Guidelines* states that a Lead Agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project will comply with the requirements in a plan or regulation that apply to the project that is specified in law or adopted by the public agency and has specific requirements to reduce the emissions of GHG.

to reduce GHG emissions or would emit more than 6,000 metric tons of CO_2e per year, it would be considered to have significant impacts under this threshold, and thus could be expected to impede the State's mandatory requirement under AB 32 to reduce statewide GHG emissions to 1990 levels by 2020. It is recognized that this standard is interim and will likely change over time as further guidance is provided by the expert regulatory agencies.

For the purpose of this technical analysis, the concept of CO_2e is used to describe how much global warming a given type and amount of GHG may cause, using the functionally equivalent amount or concentration of CO_2 as the reference. Individual GHGs have varying global warming potentials and atmospheric lifetimes. The CO_2e is a consistent methodology for comparing GHG emissions since it normalizes various GHG to the same metric. The reference gas is CO_2, which has a global warming potential equal to 1.

The equation below provides the basic calculation required to determine CO_2e from the total mass of a given GHG using the global warming potentials published by the Intergovernmental Panel on Climate Change (IPCC).

Tonnes (Metric Tons) of CO_2e = Tonnes (Metric Tons) of GHG x GWP

Where: CO_2e = carbon dioxide equivalent
GHG = greenhouse gas
GWP = global warming potential

This method was used to evaluate GHG emissions during construction and operation of the proposed project. For this analysis only, CO_2, CH_4, and N_2O are considered. This is due to the relatively large contribution of these gases in comparison to other GHGs produced during the project construction and operation phases.

The GHG emission estimates were calculated using CalEEMod (Version 2011.1.1). CalEEMod stands for "California Emissions Estimator Model," and is an air quality modeling program that estimates air pollution emissions in lbs/day or tons per year for various land uses, area sources, construction projects, and project operations. Mitigation measures can also be specified to analyze the effects of mitigation on project emissions. CalEEMod estimates a project's CO_2, N_2O, and CH_4 emissions from area and mobile sources, energy and water consumption, and waste generation.

An individual project cannot generate enough GHG emissions to significantly influence climate change, but individual projects can incrementally contribute toward the potential for the cumulative emissions driving GCC. This analysis analyzes whether the project's contributions combined with emissions from all other past, present, and probable future projects contribute toward the potential for GCC on a cumulative basis and whether the project's contribution to the impact is "cumulatively considerable."

Construction and operation of project development would generate GHG emissions, with the majority of energy consumption (and associated generation of GHG emissions) occurring during the project's operation (as opposed to its construction). Typically, more than 80 percent of the total energy consumption takes place during the use of buildings, and less than 20 percent is consumed during construction.[12]

Overall, the following activities associated with the proposed project could directly or indirectly contribute to the generation of GHG emissions:

[12] United Nations Environment Programme (UNEP), 2007. *Buildings and Climate Change: Status, Challenges and Opportunities*, Paris, France.

- **Removal of Vegetation:** The removal of vegetation for construction results in a loss of the CO sequestration in plants. However, planting of additional vegetation would result in additional CO sequestration and would reduce the GHG emissions of the project.
- **Construction Activities:** During construction of the project, GHGs would be emitted through the operation of construction equipment and from worker and builder supply vendor vehicles, each of which typically uses fossil-based fuels to operate. The combustion of fossil-based fuels creates GHGs such as CO_2, CH_4, and N_2O.
- **Gas, Electricity, and Water Use:** Natural gas use results in the emissions of two GHGs: CH_4 (the major component of natural gas) and CO_2 (from the combustion of natural gas). Electricity use can result in GHG production if the electricity is generated by combusting fossil fuel. California's water conveyance system is energy-intensive. Approximately one-fifth of the electricity and one-third of the nonpower plant natural gas consumed in California are associated with water delivery, treatment, and use.[13]
- **Solid Waste Disposal:** Solid waste generated by the project could contribute to GHG emissions in a variety of ways. Landfilling and other methods of disposal use energy for transporting and managing the waste, and they produce additional GHGs to varying degrees. Landfilling, the most common waste management practice, results in the release of CH_4 from the anaerobic decomposition of organic materials. CH_4 is 25 times more potent a GHG than CO_2. However, landfill CH_4 can also be a source of energy. In addition, many materials in landfills do not decompose fully, and the carbon that remains is sequestered in the landfill and not released into the atmosphere.
- **Motor Vehicle Use:** Transportation associated with the proposed project would result in GHG emissions from fuel combustion in daily automobile and truck trips. CO_2 is the most significant GHG emitted by vehicles, but lesser amounts of CH_4 and N_2O are also emitted in vehicle exhaust.

Construction GHG Emissions. GHG emissions associated with the project would occur over the short term from construction activities, consisting primarily of emissions from equipment exhaust. As discussed below, there would also be long-term regional emissions associated with project-related vehicular trips and stationary source emissions such as natural gas used for heating. The calculation presented below includes construction emissions in terms of CO_2 and annual CO_2e GHG emissions from increased energy consumption, water usage, and solid waste disposal, as well as estimated GHG emissions from vehicular traffic that would result from implementation of the project.

GHG emissions generated construction of the proposed project would predominantly consist of CO_2. In comparison to criteria air pollutants such as ozone (O_3) and PM_{10}, CO_2 emissions persist in the atmosphere for a substantially longer period of time. While emissions of other GHGs such as CH_4 are important with respect to GCC, emission levels of other GHGs are less dependent on the land use and circulation patterns associated with the proposed land use development project than are levels of CO_2.

Construction activities produce combustion emissions from various sources such as site grading, utility engines, on-site heavy-duty construction vehicles, equipment hauling materials to and from the site, asphalt paving, and motor vehicles transporting the construction crew. Exhaust emissions from on-site construction activities would vary daily as construction activity levels change. The CalEEMod modeling performed for the construction analysis (see Appendix B) shows that emissions of CO_2e would be as high as 160 metric tons per year during project construction.

The project would be required to implement the construction exhaust control measures as required by SCAQMD Rules 402 and 403, including minimization of construction equipment idling and

[13] California Air Resources Board (ARB), 2010. *Economic Sectors Portal*. Website: www.arb.ca.gov/cc/ghgsectors/ghgsectors.htm. Accessed January 5, 2010.

implementation of proper engine tuning and exhaust controls. Compliance with regulations would reduce GHG emissions during the construction period.

Architectural coatings used in construction of the project may contain volatile organic compounds (VOCs) that are similar to reactive organic gases (ROGs) and are part of O_3 precursors. However, there are no substantial emissions of GHGs from architectural coatings.

Therefore, construction emissions would be below the screening threshold of 1,600 metric tons of CO_2e per year, and project construction would be considered to have a less than significant impact related to GHG emissions and would not impede or interfere with achieving the State's emission reduction objectives in AB 32 (and EO S-03-05). No mitigation is required.

Operational GHG Emissions. Long-term operation of the proposed project would generate GHG emissions from area and mobile sources and indirect emissions from stationary sources associated with energy consumption. Mobile-source emissions of GHGs would include project-generated vehicle trips associated with on-site facilities and customers/employees/deliveries to the project site. Area-source emissions would be associated with activities such as landscaping and maintenance of proposed land uses, natural gas for heating, and other sources. Increases in stationary source emissions would also occur at off-site utility providers as a result of demand for electricity, natural gas, and water by the proposed uses.

The GHG emission estimates presented in Table 4.7.A show the emissions associated with the level of development at build out. Appendix B includes the annual CalEEMod calculations for GHG emissions. Table 4.7.A shows that project operations would result in average annual emissions of 1,626 metric tons of CO_2e per year.

Table 4.7.A: Project Greenhouse Gas Emissions

Emission Source	Emissions (metric tons per year)			
	CO_2	CH_4	N_2O	CO_2e
Area Sources	0.00	0.00	0.00	0.00
Energy Consumption	182.10	0.01	0.00	183.23
Mobile Sources	1,241.10	0.05	0.00	1,242.19
Waste Generation	78.97	4.67	0.00	176.97
Water Consumption	19.95	0.14	0.00	24.03
Total Annual Emissions	1,522.12	4.87	0.00	1,626.42

Source: LSA Associates, Inc., July 2011.
CH_4 = methane
CO_2 = carbon dioxide
CO_2e = carbon dioxide equivalent
N_2O = nitrous oxide

Due to the global nature of this phenomenon and the scale of emissions, total emissions are expressed in units of teragrams (a trillion [10^{12}] grams or 1 MMT) per year (Tg/year). This is the standard metric unit used worldwide. Forecast emissions calculated for the project indicate that the project, during operation, would exceed the screening threshold of 1,600 metric tons of CO_2e per year, but would not exceed the interim numerical standard of 7,000 metric tons of CO_2e per year.

Summary. The proposed project would generate up to 1,626 metric tons of CO_2e per year of new emissions, as shown in Table 4.7.A. The emissions from solid waste disposal and water/energy consumption would comprise approximately 23 percent of the project's total CO_2e emissions. The

emissions from vehicle exhaust would comprise approximately 77 percent of the project's total CO_2e emissions. Tailpipe emission controls are within the jurisdiction of the State and federal governments and are outside the control of the City.

The remaining CO_2e emissions are primarily associated with building heating systems and increased regional power plant electricity generation due to the project's electrical demands. The project would comply with existing State and federal regulations regarding the energy efficiency of buildings, appliances, and lighting, which would reduce the project's electricity demand. The new buildings constructed in accordance with current energy efficiency standards would be more energy efficient than older buildings.

At present, there is a federal ban on chlorofluorocarbons (CFCs); therefore, it is assumed the project would not generate emissions of CFCs. The project may emit a small amount of HFC emissions from leakage and service of refrigeration and air conditioning equipment and from disposal at the end of the life of the equipment. However, the details regarding refrigerants to be used in the project site are unknown at this time. PFCs and SF_6 are typically used in industrial applications, none of which would be used on site. Therefore, it is not anticipated that the project would contribute significant emissions of these additional GHGs.

As stated above, forecast emissions indicate that the project, during operation, would exceed the screening threshold of 1,600 metric tons of CO_2e per year, but would not exceed the interim numerical standard of 7,000 metric tons of CO_2e per year. Because the proposed project would exceed the screening threshold, it is also necessary to analyze whether the proposed project would be substantially consistent with policies and standards set out in federal, State, and local plans designed to reduce GHG emissions.

The California Environmental Protection Agency (CalEPA) Climate Action Team (CAT) and ARB have developed several reports to achieve the Governor's GHG targets that rely on voluntary actions of California businesses, local government and community groups, and State incentive and regulatory programs. These include the CAT 2006 "*Report to Governor Schwarzenegger and the Legislature*," ARB's 2007 "*Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California*," and ARB's "*Climate Change Proposed Scoping Plan: a Framework for Change."*

The reports identify strategies to reduce California's emissions to the levels proposed in EO S-3-05 and AB 32 that are applicable to the proposed project. The proposed Scoping Plan is the most recent document, and the strategies included in the Scoping Plan that apply to the project can be found in Table 4.B. Table 4.B also summarizes the extent to which the project would comply with the strategies to help California reach the emission reduction targets.

The strategies listed in Table 4.7.B are addressed as either part of the project, required mitigation measures, or requirements under local or State ordinances. Implementation of these strategies/measures would ensure that the proposed project would not conflict with or impede the implementation of reduction goals identified in AB 32, the Governor's EO S-3-05, and other strategies to help reduce GHGs to the level proposed by the Governor. Many of the individual elements of this measure are already included as part of the proposed project or are required as part of project-specific mitigation measures. Therefore, the project's contribution to cumulative GHG emissions would be less than significant.

Table 4.7.B: Project Consistency with Greenhouse Gas Emission Reduction Strategies

Strategy	Project Compliance
Energy Efficiency Measures	
Energy Efficiency. Maximize energy efficiency building and appliance standards, and pursue additional efficiency efforts including new technologies, and new policy and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California (including both investor-owned and publicly owned utilities). **Renewables Portfolio Standard.** Achieve a 33 percent renewable energy mix statewide. **Green Building Strategy.** Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	**Consistent.** The proposed project would be required to comply with the updated Title 24 standards for building construction.
Water Conservation and Efficiency Measures	
Water Use Efficiency. Continue efficiency programs and use cleaner energy sources to move and treat water. Approximately 19 percent of all electricity, 30 percent of all natural gas, and 88 million gallons of diesel are used to convey, treat, distribute and use water and wastewater. Increasing the efficiency of water transport and reducing water use would reduce GHG emissions.	**Consistent.** The total water demand for the proposed project would be 2,160 gal/day (1,290 gal/day for Phase 1 and 870 gal/day for Phase 2). In addition, the proposed project would incorporate water-efficient plumbing fixtures and water-efficient landscaping, including the utilization of native plant species in addition to drought-tolerant and ornamental species.
Solid Waste Reduction Measures	
Increase Waste Diversion, Composting, and Commercial Recycling, and Move Toward Zero-Waste. Increase waste diversion from landfills beyond the 50 percent mandate to provide for additional recovery of recyclable materials. Composting and commercial recycling could have substantial GHG reduction benefits. In the long term, zero-waste policies that would require manufacturers to design products to be fully recyclable may be necessary.	**Consistent.** The Integrated Waste Management Act of 1989 required that every city and county in California implement programs to recycle, reduce refuse at the source, and compost waste to achieve a 50 percent reduction in solid waste being taken to landfills. In order to assist in maintaining this goal, the proposed development would be required to incorporate storage and collection of recyclable materials into the project design and to include provisions for the collection of recyclables in refuse collection contracts.
Transportation and Motor Vehicle Measures	
Vehicle Climate Change Standards. AB 1493 (Pavley) required the State to develop and adopt regulations that achieve the maximum feasible and cost-effective reduction of GHG emissions from passenger vehicles and light duty trucks. Regulations were adopted by ARB in September 2004. **Light-Duty Vehicle Efficiency Measures.** Implement additional measures that could reduce light-duty GHG emissions. For example, measures to ensure that tires are properly inflated can both reduce GHG emissions and improve fuel efficiency. **Adopt Heavy- and Medium-Duty Fuel and Engine Efficiency Measures.** Regulations to require retrofits to improve the fuel efficiency of heavy-duty trucks that could include devices that reduce aerodynamic drag and rolling resistance. This measure could also include hybridization of and increased engine efficiency of vehicles. **Low Carbon Fuel Standard.** ARB identified this measure as a Discrete Early Action Measure. This measure would reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020.	**Consistent.** The project does not involve the manufacture, sale, or purchase of vehicles. However, vehicles that operate within and access the project site are subject to any vehicle and fuel standards that ARB adopts.

Table 4.7.B: Project Consistency with Greenhouse Gas Emission Reduction Strategies

Strategy	Project Compliance
Regional Transportation-Related Greenhouse Gas Targets. Develop regional GHG emissions reduction targets for passenger vehicles. Local governments will play a significant role in the regional planning process to reach passenger vehicle GHG emissions reduction targets. Local governments have the ability to directly influence both the siting and design of new residential and commercial developments in a way that reduces GHGs associated with vehicle travel.	**Consistent.** Specific regional emission targets for transportation emissions do not directly apply to this project; regional GHG reduction target development is outside the scope of this project. The project is consistent with the applicable General Plan Land Use and Zoning designations for the site.
Measures to Reduce High Global Warming Potential Gases. ARB has identified Discrete Early Action measures to reduce GHG emissions from the refrigerants used in car air conditioners, semiconductor manufacturing, and consumer products. ARB has also identified potential reduction opportunities for future commercial and industrial refrigeration, changing the refrigerants used in auto air conditioning systems, and ensuring that existing car air conditioning systems do not leak.	**Consistent.** New commercial air-conditioning products used or serviced on site are subject to future ARB rules and regulations.

Source: LSA Associates, Inc., July 2011.
AB = Assembly Bill
ARB = California Air Resources Board
gal/day = gallons per day
GHG = greenhouse gas

GHG emissions are not confined to a particular air basin but are dispersed worldwide. Consequently, it is speculative to determine how project-related GHG emissions would contribute to GCC and how GCC may impact the State. Therefore, project-related GHG emissions are not project-specific impacts to global warming but are instead the project's contribution to this cumulative impact. Project-related GHG emissions and their contribution to GCC impacts in the State are less than significant and less than cumulatively considerable because the project (1) would be substantially consistent with policies and standards set out in federal, State, and local plans designed to reduce GHG emissions, and (2) would emit less than 7,000 metric tons of CO_2e per year.

Additionally, the net increase in air pollutant emissions would not exceed the SCAQMD thresholds for any of the criteria pollutants; thus, the emissions of GHGs are also unlikely to result in significant impacts.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

4.8 Hazards and Hazardous Materials *Would the project:*		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Create a significant hazard to the public or the environment through the routine transport, use or disposal of hazardous materials?	☐	☒	☐	☐
(b)	Create a significant hazard to the public or the environment through reasonable foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
(c)	Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☐	☒
(d)	Be located on a site which is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	☐	☐	☐	☒
(e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
(f)	For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	☐	☐	☐	☒
(g)	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☒	☐
(h)	Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Discussion:

a) **Less than Significant Impact with Mitigation Incorporated.** Hazardous materials are chemicals that could potentially cause harm during an accidental release or mishap, and they are defined as being toxic, corrosive, flammable, reactive, an irritant, or a strong sensitizer. Hazardous substances include all chemicals regulated under the United States Department of Transportation "hazardous material" regulations and the United States Environmental Protection Agency (EPA) "hazardous waste" regulations. Hazardous wastes require special handling and disposal because of their potential to damage public health and the environment. The probable frequency and severity of consequences from the use, transport, or disposal of hazardous materials is affected by the type of substance, quantity used or managed, and nature of the activities and operations.

Construction of the proposed project would involve the use of chemical agents, solvents, paints, and other hazardous materials that are associated with construction activities. The amount of hazardous chemicals present during construction would be limited and would be handled in compliance with existing government regulations. The potential for the release of hazardous materials during project construction is low and, even if a release would occur, it would not result in a significant hazard to the public, surrounding land uses, or environment due to the small quantities of these materials used during construction.

Project operation would involve the use of potentially hazardous materials (e.g., solvents, cleaning agents, paints, fertilizers, pesticides) typical of commercial office facilities that, when used correctly and in compliance with existing laws and regulations, would not result in a significant hazards to residents or workers in the vicinity of the proposed project.

Operation of the proposed medical office building would involve the use of potentially hazardous materials associated with medical facilities. The State Medical Waste Management Act (MWMA) (California Health and Safety Code Sections 117600–118360 and 22 CCR Sections 65600–65628) provides for regulation of medical waste generators, haulers, and treatment facilities. This act repealed earlier State laws under which infectious waste was regulated as a subclass of hazardous waste. The MWMA defines medical waste as all of the following:

- Biohazardous waste, or "sharps" waste
- Waste that is generated or produced as a result of the diagnosis, treatment, or immunization of human beings or animals, in related research, in the production or testing of biological substances, or in the accumulation of properly contained home-generated "sharps" waste
- Trauma scene waste contaminated with human blood or other fluids, produced by an accident or illness

Medical waste that contains infectious agents is considered biohazardous. Biohazardous waste includes any of the following:

- Laboratory waste, including human or animal specimen cultures, cultures and stocks of infectious agents, and wastes produced from microbial cultures
- Human surgery specimens or tissues, animal carcasses, or bodily materials suspected of being contaminated with infectious agents known to be contagious to humans
- Wastes (including containers and equipment) containing blood or fluid blood products

Although not considered a large quantity generator (LQG) of medical waste,[14] the proposed project would be required to treat medical waste, or have someone else treat it, prior to disposal. In addition, the MWMA requires that transportation of medical waste be conducted by a registered medical waste hauler. Within the regulatory framework of the MWMA, the Medical Waste Management Program of the California Department of Health Services (CDHS) ensures the proper handling and disposal of medical waste by permitting and inspecting medical waste in off-site treatment facilities and transfer stations throughout the state. The CDHS also oversees all medical waste transporters. In Orange County, the Health Care Agency (HCA)/Environmental Health Division implements and enforces the MWMA.

Therefore, in compliance with the MWMA, as required by State law and Mitigation Measure HAZ-1, would ensure that there would be no significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous medical waste as a result of the proposed project.

Significance Determination: Potentially Significant

Mitigation Measure:

HAZ-1 **Medical Waste Management Act.** Prior to issuance of any certificates of occupancy, the City of Lake Forest Director of Development Services, or designee, shall verify that a registered medical waste hauler, who is listed on the County of Orange list of permitted medical waste haulers, has been retained by the project applicant and shall dispose of medical waste generated by the project at a State-approved autoclave or incinerator. A letter

[14] Under the MWMA, LQG are those facilities that generate 200 pounds or more of medical waste in any month of a 12-month period.

from the medical waste hauler or a copy of an executed contract shall be considered sufficient proof of retention.

Significance Determination After Mitigation: Less than Significant

b) **Less than Significant Impact.** Development of the proposed project would involve the use of chemical agents, solvents, paints, and other hazardous materials that are associated with construction activities. The amount of these chemicals present during construction is limited and would be in compliance with existing government regulations. In addition, based on the findings of the Phase 1 Environmental Site Assessment Report (January 2003) (Appendix H) prepared for the project site, there is no evidence of recognized environmental conditions associated with the property. In addition, no surrounding sites were identified that may pose an environmental concern during construction.

As previously stated, operation of the proposed medical office building would involve the use of potentially hazardous materials associated with medical facilities. Proper use of potentially hazardous materials, compliance with City of Orange Fire Department regulations, and compliance with the MWMA (California Health and Safety Code Sections 117600–118360 and 22 CCR Sections 65600–65628) would ensure that the proposed project would not create a significant hazard to the public or to the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials, and no mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

c) **No Impact.** There are no existing or proposed schools located within 0.25 mi of the project site. The closest school, Country Village Preschool and Kindergarten, is located approximately 0.3 mi northwest of the project site. Therefore, the project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mi of an existing or proposed school. Therefore, no impacts are anticipated, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

d) **No Impact.** The project is not located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, and as a result, the proposed project would not create a significant hazard to the public or the environment. Therefore, no impacts are anticipated, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

e) **No Impact.** The proposed project is not located within the vicinity of a private airstrip; however, a private heliport is located approximately 6 mi from the project site. The proposed project would not interfere with or in any way modify the operation of the heliport. Due to the project site's distance from the heliport and the relatively low height of the proposed building, the proposed project would not result in a safety hazard for people residing or working in the project area. Therefore, no impacts are anticipated, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

f) **No Impact.** The proposed project is not located within 2 mi of a public airport, and as a result, the proposed project would not result in a safety hazard for people residing or working in the project area. Therefore, no impacts are anticipated, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

g) **Less than Significant.** Roads that are used as response corridors/evacuation routes usually follow the most direct path to or from various parts of a community. For the project area, the main corridors would be Portola Parkway, Bake Parkway, Lake Forest Drive, and SR-241. Access to, from, and on the site for emergency vehicles would be reviewed and approved by the City and the Orange County Fire Department prior to project construction. All proposed structures would be required to comply with all applicable codes and ordinances for emergency vehicle access, which would ensure adequate access to, from, and on the site for emergency vehicles. In addition, the proposed project would not result in a significant traffic impact to any study area intersections. Therefore, the proposed project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. Impacts related to adopted emergency response plans would be less than significant, and no mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

h) **No Impact.** The project site is located within a commercial area within the City and is bounded on all side by urban uses. According to the City General Plan Safety and Noise Element, the project site is not located in an Area of Fire Hazard. In addition, according to the Orange County Fire Authority (OCFA) Fire Hazard Map as well the Statewide CalFire Map (2007), the proposed project is not located in an area designated as a Very High Fire Hazard Severity Area/Special Fire Protection Area or within an area designated by the State as a Fire Hazard Severity Zone. As a result, the proposed project would not expose people or structures to a significant risk of loss, injury, or death involving wildland fires. Therefore, no impacts are anticipated, and no mitigation measures are required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

4.9 Hydrology and Water Quality *Would the project:*		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Violate any water quality standards or waste discharge requirements?	☐	☒	☐	☐
(b)	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of preexisting nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☒	☐
(c)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in a substantial erosion or siltation on- or off-site.	☐	☒	☐	☐
(d)	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	☐	☒	☐	☐
(e)	Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☒	☐	☐
(f)	Otherwise substantially degrade water quality?	☐	☒	☐	☐
(g)	Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
(h)	Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	☐	☐	☐	☒
(i)	Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
(j)	Inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Discussion:

a) **Less than Significant with Mitigation Incorporated.** Pollutants of concern during construction include sediments, trash, petroleum products, concrete waste (dry and wet), sanitary waste, and chemicals. Each of these pollutants on its own or in combination with other pollutants can have a detrimental effect on water quality. During construction activities, excavated soil would be exposed, and there would be an increased potential for soil erosion and sedimentation compared to existing conditions. In addition, chemicals, liquid products, petroleum products (such as paints, solvents, and fuels), and concrete-related waste may be spilled or leaked and have the potential to be transported via storm runoff into receiving waters.

During construction, the total disturbed soil area would be 5.9 ac. Because the proposed project disturbs greater than 1 ac of soil, the project is subject to the requirements of the State Water Resources Control Board's National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002) (Construction General Permit).

As specified in Mitigation Measures WQ-1 and WQ-2, coverage under the Construction General Permit would have to be obtained separately for Phases 1 and 2 of the proposed project. Under the Construction General Permit, the project would be required to prepare a SWPPP and implement construction BMPs

detailed in the SWPPP during construction activities. Construction BMPs would include, but not be limited to, Erosion Control and Sediment Control BMPs designed to minimize erosion and retain sediment on site and Good Housekeeping BMPs to prevent spills, leaks, and discharge of construction debris and waste into receiving waters.

Anticipated pollutants associated with the proposed project (commercial development with parking lot) include heavy metals, organic compounds, trash and debris, and oil and grease. Potential pollutants of concern include bacteria/virus, nutrients, pesticides, sediments, and oxygen-demanding substances. Primary pollutants of concern based on anticipated and potential pollutants and receiving water impairments include heavy metals (copper), nutrients, pesticides (DDT), sediments, and organic compounds (toxaphene).

A *Water Quality Management Plan* (WQMP) (Appendix E) has been prepared for Phase 1 of the proposed project that details Source Control, Site Design, and Treatment Control BMPs that would be implemented to reduce impacts to water quality from operation of Phase 1. Phase 1 of the proposed project would include bio-retention basins on the north and northeast sides of the project site to treat runoff from the site. Figures 2.3a and 2.3b illustrate the proposed BMPs. As detailed in Mitigation Measure WQ-3, a WQMP would be prepared for Phase 2 of the proposed project. The BMPs specified in the Phase 2 WQMP would be implemented to treat runoff from the project site, consistent with the requirements and regulations in effect at that time. It is currently anticipated that BMPs for Phase 2 would be located along the west side of the site.

With incorporation of construction and post-construction BMPs that would target pollutants of concern, as specified in Mitigation Measures WQ-1, WQ-2, and WQ-3, the proposed project would not violate any water quality standards or waste discharge requirements. Therefore, with implementation of Mitigation Measures WQ-1, WQ-2, and WQ-3, impacts related to waste discharge requirements and water quality standards would be less than significant.

Significance Determination: Potentially Significant

Mitigation Measures:

WQ-1 Prior to issuance of a grading permit for Phase 1, the project applicant shall obtain coverage under the State Water Resources Control Board National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002) (Construction General Permit) for Phase 1 of the proposed project. The project applicant shall provide the Waste Discharge Identification Number (WDID) to the City to demonstrate proof of coverage under the Construction General Permit. A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared and implemented for the project in compliance with the requirements of the Construction General Permit. The SWPPP shall identify construction Best Management Practices (BMPs) to be implemented to ensure that the potential for soil erosion and sedimentation is minimized and to control the discharge of pollutants in storm water runoff as a result of construction activities.

WQ-2 Prior to the issuance of any grading or building permits for the construction of Phase 2, the project applicant shall obtain coverage under the State Water Resources Control Board National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002) (Construction General Permit) for Phase 2 of the proposed project. The project applicant shall provide the Waste Discharge Identification Number (WDID) to the City to demonstrate proof of coverage under the Construction General Permit. A Storm Water

Pollution Prevention Plan (SWPPP) shall be prepared and implemented for the project in compliance with the requirements of the Construction General Permit. The SWPPP shall identify construction Best Management Practices (BMPs) to be implemented to ensure that the potential for soil erosion and sedimentation is minimized and to control the discharge of pollutants in storm water runoff as a result of construction activities.

WQ-3 Prior to the issuance of any grading or building permits for the construction of Phase 2, the project applicant shall prepare a Water Quality Management Plan (WQMP) for Phase 2 of the project. The WQMP shall be prepared consistent with the Orange County Municipal Separate Storm Sewer System (MS4) Permit, Drainage Area Management Plan, Model WQMP, and Technical Guidance Document in effect at that time. The WQMP shall specify Best Management Practices (BMPs) to be incorporated into the design of Phase 2 of the project. The WQMP shall be provided to the City of Lake Forest for review and approval.

Significance Determination After Mitigation: Less than Significant

b) **Less than Significant Impact.** The project site is not in a recharge area owned by the Orange County Water District. The proposed project would increase impervious surface areas on site. However, according to the WQMP, percolation rates of on-site soils is low. Therefore, it is likely that infiltration is low in existing conditions. In addition, operation of the proposed project would not require groundwater extraction. Groundwater is not anticipated to be encountered during construction; therefore, groundwater dewatering during construction would not be required. Site development would not substantially deplete groundwater supplies or substantially interfere with groundwater recharge, and no mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

c) **Less than Significant with Mitigation Incorporated.** During construction activities, soil would be exposed and disturbed, drainage patterns would be temporarily altered during grading and other construction activities, and there would be an increased potential for soil erosion and siltation compared to existing conditions. Additionally, during a storm event, soil erosion and siltation could occur at an accelerated rate. As discussed above in Response 4.9.a and specified in Mitigation Measures WQ-1 and WQ-2, the Construction General Permit requires preparation of a SWPPP to identify Construction BMPs to be implemented as part of the proposed project to reduce impacts to water quality during construction, including those impacts associated with soil erosion and siltation. With implementation of the Construction BMPs as specified in Mitigation Measure WQ-1, impacts related to on- or off-site erosion or siltation would be less than significant.

The proposed project would result in a slight alteration of the existing on-site drainage patterns due to construction of the medical office building and parking lot. In the current condition, the east lot drains into a temporary desilting basin (sump pit) located at the northeast corner of the site that drains to the City's storm drain system. The west lot drains toward the northwest corner of the property, over the sidewalk, and into the street. For Phase 1, storm water runoff from the parking lot and the majority of the building would flow to the northeast corner of the site to a proposed bio-retention basin. The remainder of storm water runoff would flow to a second bio-retention basin along the north property line. Figures 2.3a and 2.3b illustrate the locations of the proposed BMPs. In the proposed condition for Phase 1, 2.5 ac of the site would be impervious surface areas and not prone to erosion or siltation. The

remaining 3.4 ac of the site would be landscaping and the bio-retention basins, which would collect and treat runoff and minimize erosion and siltation.

As a result of the increase in impervious surface area, Phase 1 of the project is anticipated to increase peak flow from 12.5 cubic feet per second (cfs) to 15.9 cfs for a 10-year storm event and from 15.1 cfs to 19.1 cfs for a 25-year storm event. The required detention volume for Phase 1 to match predevelopment peak flow is 2,700 cf and 3,400 cf for a 10-year and 25-year storm event, respectively. As specified in Mitigation Measure WQ-4, the bio-retention basins would be designed to provide a storage volume greater than the required detention volume for Phase 1 of the project to ensure that the peak flow and volume of storm water runoff from the site is equal to or lower than existing conditions. During large storm events, storm water runoff in excess of the BMP capacity would overflow to the City's storm drain system through a curb inlet located at the corner of Towne Centre Drive and Lake Forest Drive. As specified in Mitigation Measure WQ-5, BMPs would be incorporated into the design of Phase 2 to ensure that peak flow and volume of storm water runoff from the site are not increased compared to existing conditions.

Because the volume and velocity of runoff from the site would be equal to or lower than existing conditions with implementation of Mitigation Measures WQ-4 and WQ-5, the proposed project would not contribute to downstream erosion or siltation. Finally, the proposed project would not alter the course of a stream or river. Therefore, with implementation of Mitigation Measures WQ-4 and WQ-5, operation of the proposed project would not substantially alter the existing drainage pattern of the site in a manner that would result in substantial erosion or siltation on or off site.

Significance Determination: Potentially Significant

Mitigation Measures:

WQ-4 Prior to issuance of grading permits, the project applicant shall submit documentation to the City of Lake Forest demonstrating that the bio-retention basins for Phase 1 of the project have been adequately sized so that peak flow and volume of storm water runoff from the site are not increased compared to existing conditions.

WQ-5 Prior to issuance of building permits for Phase 2, the project applicant shall submit documentation to the City of Lake Forest demonstrating that the proposed Best Management Practices (BMPs) meet any hydromodification requirements applicable at that time and that the BMPs have been adequately sized so that peak flow and volume of storm water runoff from the site are not increased compared to existing conditions.

Also refer to Mitigation Measures WQ-1, WQ-2, and WQ-3

Significance Determination After Mitigation: Less than Significant

d) **Less than Significant with Mitigation Incorporated.** As discussed above, the proposed project would alter the existing on-site drainage patterns and permanently increase the impervious surface area compared to existing conditions. However, as specified in Mitigation Measures WQ-4 and WQ-5, the proposed BMPs would be sized to accommodate the increased storm water runoff; therefore, the proposed project would not result in on-site or off-site flooding. Therefore, within implementation of Mitigation Measures WQ-4 and WQ-5, alterations to the existing drainage patterns would not substantially increase the rate or amount of surface runoff or result in flooding on or off site.

Significance Determination: Potentially Significant

Mitigation Measures: Refer to Mitigation Measures WQ-4 and WQ-5

Significance Determination After Mitigation: Less than Significant

e) **Less than Significant with Mitigation Incorporated.** As discussed above in Responses 4.9.c and 4.9.d, the proposed project would increase the impervious surface area compared to existing conditions, which would increase storm water runoff. However, as specified in Mitigation Measures WQ-4 and WQ-5, the proposed BMPs would be sized to accommodate the increased storm water runoff. Therefore, the project would not contribute runoff water that would exceed the capacity of an existing or planned storm water drainage system.

As discussed in Response 4.9.a, construction of the proposed project has the potential to introduce pollutants to the storm water drainage system from erosion, siltation, and accidental spills. However, the Construction General Permit requires preparation of a SWPPP to identify construction BMPs to be implemented during project construction to reduce impacts to water quality, including those impacts associated with soil erosion, siltation, and spills. In addition, Phase 1 of the project includes bio-retention basins to treat storm water runoff from the site. As specified in Mitigation Measure WQ-3, Phase 2 would be required to implement additional operational BMPs. Therefore, with implementation of Mitigation Measures WQ-1, WQ-2, and WQ-3, which require compliance with the Construction General Permit and implementation of operational BMPs, the proposed project would not provide substantial additional sources of polluted runoff.

Significance Determination: Potentially Significant

Mitigation Measures: Refer to Mitigation Measures WQ-1, WQ-2, WQ-3, WQ-4, and WQ-5

Significance Determination After Mitigation: Less than Significant

f) **Less than Significant with Mitigation Incorporated.** Refer to Response 4.9.a above.

Significance Determination: Potentially Significant

Mitigation Measures: Refer to Mitigation Measures WQ-1, WQ-2, and WQ-3

Significance Determination After Mitigation: Less than Significant

g) **No Impact.** According to the Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), the project site is not located within a 100-year floodplain. The project site is mapped as Zone X, which is defined as the area determined to be outside the 0.2 percent annual change floodplain (500-year floodplain) (Map No. 06059C0316J; December 3, 2009). In addition, the project is a medical office building and does not involve any housing development. Therefore, the project would not place housing within a 100-year flood hazard area, and no impacts would occur. No mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

h) **No Impact.** As discussed in Response 4.9.g above, the project site is not located within a 100-year flood hazard area. Therefore, the proposed project would not place structures within a 100-year flood hazard area that would impede or redirect flood flows, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

i) **No Impact.** The closest water retention facilities include Upper Oso Reservoir, Lake Mission Viejo, and Irvine Lake, which are all located more than 2 mi from the project site. In addition, the project site is not located within the inundation areas of these reservoirs. Therefore, the proposed project would not expose people or structures to loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. No mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

j) **No Impact.** Seiching is a phenomenon that occurs when seismic groundshaking induces standing waves (seiches) inside water retention facilities such as reservoirs and water tanks. Such waves can cause retention structures to fail and flood downstream properties. There are no water retention facilities in close proximity to the project site. The closest water retention facilities include Upper Oso Reservoir, Lake Mission Viejo, and Irvine Lake, which are all located more than 2 mi from the project site. The risk associated with possible seiche waves is therefore not considered a potential constraint or a potentially significant impact of the project, and no mitigation is necessary.

Tsunamis are generated wave trains generally caused by tectonic displacement of the seafloor associated with shallow earthquakes, seafloor landslides, rockfalls, and exploding volcanic islands. The proposed project is located approximately 7 mi from the ocean shoreline and is not in a tsunami inundation area (Tsunami Inundation Map for Emergency Planning, Orange County, March 15, 2009; California Emergency Management Agency, California Geological Survey, and University of Southern California). The risk associated with tsunamis is therefore not considered a potential hazard or a potentially significant impact, and no mitigation is required.

Mudslides and slumps are described as a shallower type of slope failure, usually affecting the upper soil mantle or weathered bedrock underlying natural slopes and triggered by surface or shallow subsurface saturation. No existing landslides are present on the property. The risk associated with possible mudflows and mudslides is therefore not considered a potential constraint or a potentially significant impact of the project, and no mitigation is necessary.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

4.10 Land Use/Planning *Would the project:*		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Physically divide an established community?	☐	☐	☐	☒
(b)	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the General Plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☒	☐
(c)	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion:

a) **No Impact.** Implementation of the proposed project would not divide an established community since the proposed project would be constructed in a developed commercial area on a site that is zoned for commercial use. The proposed project would not disrupt or modify the existing roadway network or affect or disrupt residential neighborhoods or other commercial uses in the project vicinity. Therefore, implementation of the proposed project would not result in the physical division of any established community, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

b) **No Impact.** The main guiding documents regulating land use around the project site include the City of Lake Forest General Plan and the City of Lake Forest Zoning Ordinance. As shown in Figure 4.10.1, the project site is designated Commercial in the City's General Plan. As shown in Figure 4.10.2, the project site is zoned for commercial uses as part of the Foothill Ranch Planned Community (PC-8).

General Plan. The City of Lake Forest General Plan is the City's most fundamental planning document. The General Plan is a comprehensive plan intended to guide to the physical development of the City. It serves as a blueprint for future growth and development in the City. As a blueprint for the future, the plan contains policies and programs designed to provide decision makers with a solid basis for decisions related to land use and development.

The commercial designation includes retail, professional office, and service-oriented business activities serving a community-wide area and population. As the site is designated for commercial uses, which includes professional offices, the project is consistent with the General Plan designation.

Table 4.10.A provides a consistency analysis of the most relevant goals and policies from the City's General Plan. In order to eliminate repetitive policies and focus on key issues, policies that are not relevant to the proposed project are not included in Table 4.10.A.

Zoning Ordinance. The City of Lake Forest Zoning Ordinance is the primary implementation tool for the Land Use Element and the goals and policies contained therein. For this reason, the zoning map must be consistent with the General Plan Land Use Policy Map. The Zoning Ordinance, which

includes the Zoning Map, contains more detailed information about permitted land uses, building intensities, and required development standards.

The Zoning Ordinance designation for the proposed project site is Commercial within the Foothill Ranch Planned Community (PC-8). The Zoning District Regulations are incorporated into the Foothill Ranch Planned Community Development Plan (April 1988), a comprehensive plan for the Foothill Ranch Planned Community. Table 4.10.B provides a list of applicable development standards and an evaluation of the project's consistency with each standard. Zoning Ordinances that are not relevant to the proposed project are not included in Table 4.10.B. The proposed project does not conflict with any other provisions in the City's Zoning Ordinance. As stated in Table 4.10.B, the proposed project is consistent with applicable Zoning Code development standards, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is required

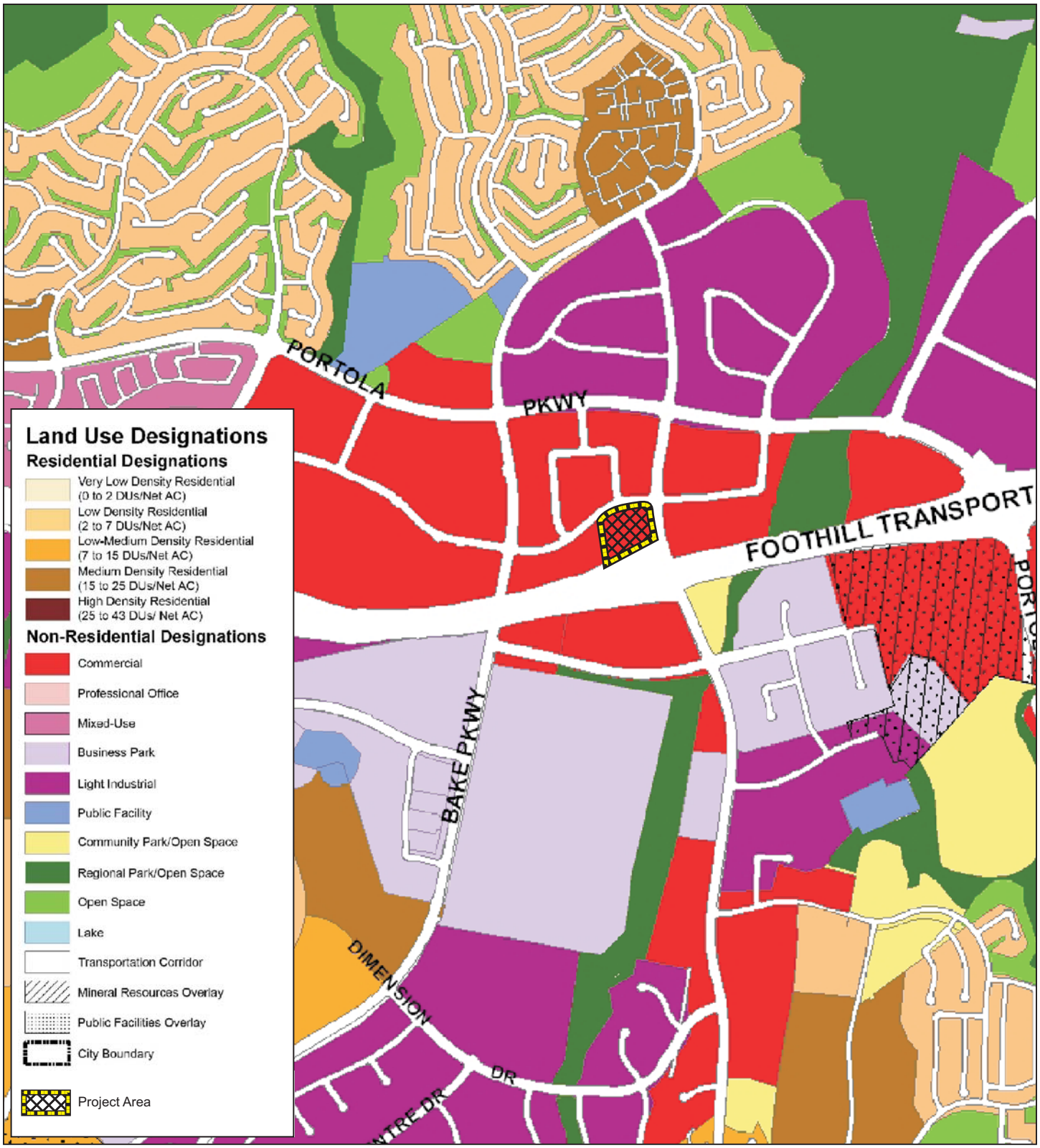
Significance Determination After Mitigation: No Impact

c) **No Impact.** The project site is currently vacant and is surrounded by urban development. While the project site is located within the planning area of the NCCP/HCP, the project site is not located within the reserve system. The proposed project site is in an area identified in the NCCP/HCP as urbanized and is located in an area designated for development. Therefore, the project would not conflict with the NCCP/HCP, and no impacts would result.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact



LSA

FIGURE 4.10.1

N

0 635 1,250

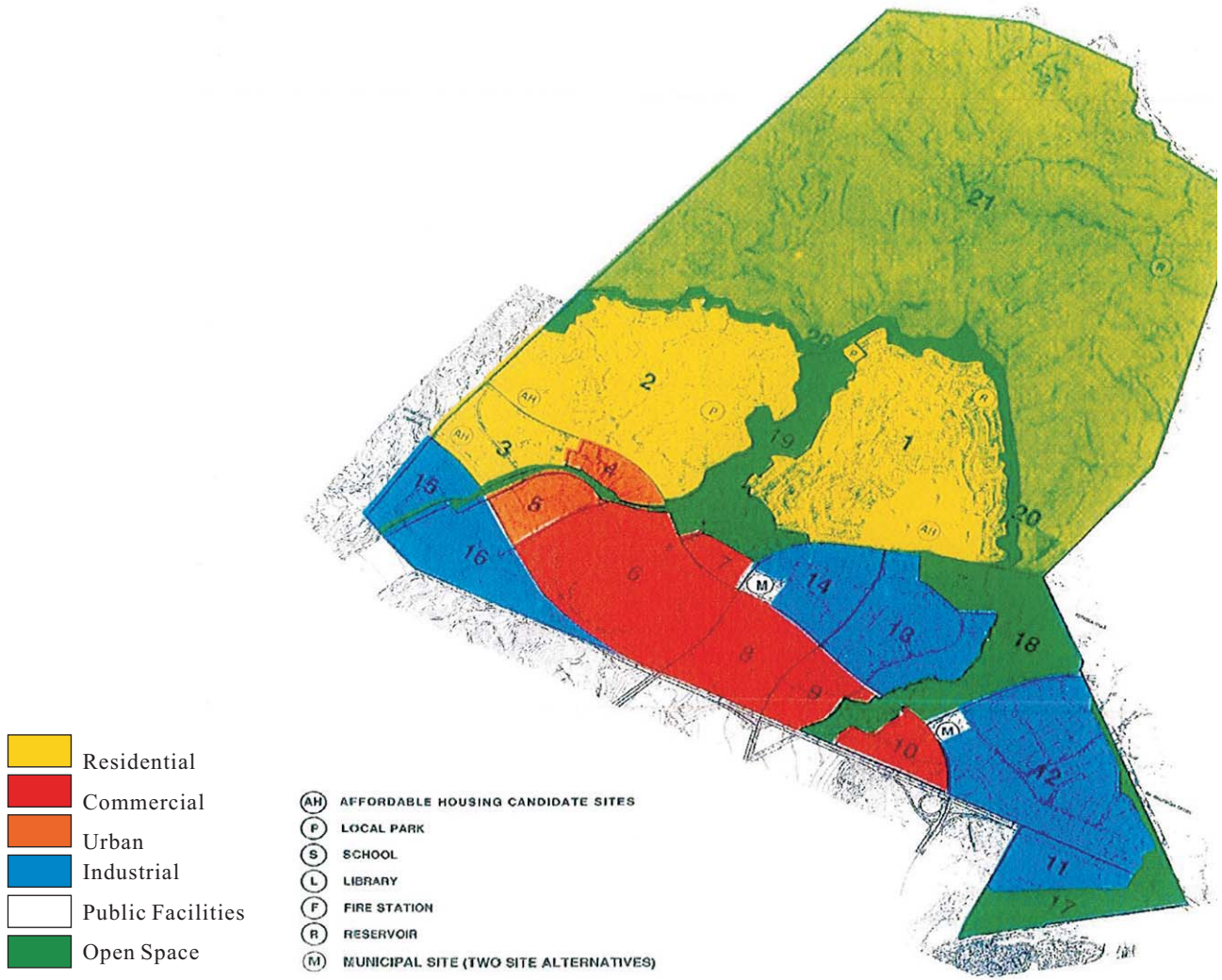
FEET

SOURCE: Lake Forest General Plan

I:\CLF1101\G\General Plan Designations.cdr (8/8/11)

Kaiser Medical Office Project

General Plan Designations



LSA

FIGURE 4.10.2

Kaiser Medical Office Project

Zoning Designations/Foothill Ranch Planned Community

NO SCALE

SOURCE: City of Lake Forest

I:\CLF1101\G\Zoning Designations.cdr (7/28/11)

Table 4.10.A: General Plan Consistency Analysis

Select General Plan Policies	Consistency Analysis
Land Use Element	
Goal 2.0: A distinct image and identity for Lake Forest.	**Consistent.** The proposed Kaiser MOB has been designed to be consistent with the architecture found in the Foothill Ranch Planned Community, which is characterized by Mediterranean-inspired architecture with tiled roofs, arcade walkways, and modern office buildings with geometrical shapes and large amounts of glass. In addition, the project includes landscaping in parking areas as well as around the perimeter of the proposed project site in compliance with the Foothill Ranch Planned Community Development Standards.
Policy 2.1: Enhance the physical attributes of Lake Forest to create an identifiable and distinct community within Orange County.	**Consistent.** The architecture of the proposed project would be comparable to and compatible with the existing architecture in the Foothill Ranch Planned Community. In addition, the project includes landscaping in parking areas as well as around the perimeter of the proposed project site in compliance with the Foothill Ranch Planned Community Development Standards.
Policy 2.2: Promote high quality in the design of all public and private development projects.	**Consistent.** The architecture of the proposed project would be comparable to and compatible with the existing architecture in the Foothill Ranch Planned Community.
Goal 3.0: New development that is compatible with the community.	**Consistent.** The architecture of the proposed project would be comparable to and compatible with the existing architecture in the Foothill Ranch Planned Community. In addition, the proposed project would be located adjacent to other office and medical office uses.
Policy 3.1: Ensure that new development fits within the existing setting and is compatible with the physical characteristics of available land, surrounding land uses, and public infrastructure availability.	**Consistent.** The architecture of the proposed project would be comparable to and compatible with the existing architecture in the Foothill Ranch Planned Community. The proposed project would be located in an area characterized by office and medical office uses. In addition, the proposed project would be served by existing public infrastructure.
Policy 3.3: Ensure that the affected public agencies can provide necessary facilities and services to support the impact and intensity of development in Lake Forest and in areas adjacent to the City.	**Consisten**t. The Fire Department, Orange County Sheriff's Department, Irvine Ranch Water District, and OC Waste & Recycling would be able to serve the proposed project at the same levels provided to this area of the City before project implementation
Policy 3.4: Blend residential and nonresidential development with landscaping and architectural design techniques to achieve visual compatibility.	**Consistent.** The architecture of the proposed project would be comparable to and compatible with the existing architecture in the Foothill Ranch Planned Community. The proposed project would be located in an area characterized by office and medical office uses; no residential uses are located in the project vicinity.
Goal 4.0: New development conforming to the established planned community development plans and agreements.	**Consistent.** The proposed project would comply with the requirements of the Foothill Ranch Planned Community (PC-8). Refer to Table 4.10.B.
Policy 4.1: Ensure that all development proposals within the planned community areas conform to applicable development plans and agreements.	**Consistent.** The proposed project would comply with the requirements of the Foothill Ranch Planned Community (PC-8). Refer to Table 4.10.B.
Goal 5.0: Diversification and expansion of economic activities, and retention of existing businesses and revenues in support of public services.	**Consistent.** The medical office buildings are proposed on a currently vacant lot; project implementation would expand the economic activities and revenue in the City.
Policy 5.1: Improve the fiscal stability of Lake Forest through retention of existing businesses, by attracting business and industry that contributes to economic growth and employment opportunities.	**Consistent.** The medical office buildings are proposed on a currently vacant lot; project implementation would expand the economic activities and revenue in the City.

Table 4.10.A: General Plan Consistency Analysis

Select General Plan Policies	Consistency Analysis
Policy 5.3: Focus efforts at economic development and business retention on the commercial and industrial areas throughout the City, including the Foothill Transportation Corridor, the San Diego Freeway (I-5), and along major thoroughfares.	**Consistent.** The medical office buildings are proposed in a commercial area adjacent to the Foothill Transportation Corridor. In addition, the project site is currently designated for Commercial uses in the City's General Plan.
Circulation Element	
Policy 2.1: Provide and maintain a City circulation system that is in balance with planned land uses in Lake Forest and surrounding areas in the region.	**Consistent.** Six key study intersections were evaluated for traffic impacts as part of this Initial Study. These intersections would continue to operate at acceptable Level of Service (LOS) after project implementation.
Goal 4.0: Promotion of non vehicular modes of travel.	**Consistent.** The proposed project would include bike racks adjacent to the medical office building. In addition, pedestrian access would be provided from Towne Centre Drive.
Policy 4.1: Promote the provision of non vehicular circulation within Lake Forest.	**Consistent.** The proposed project would include bike racks adjacent to the medical office building. In addition, pedestrian access would be provided from Towne Centre Drive.
Policy 4.2: Provide and maintain a non vehicular component of the Lake Forest overall circulation system that supports bicycles, equestrians, and pedestrians and is coordinated with those of other service districts in Lake Forest and with adjacent jurisdictions.	**Consistent.** The proposed project would include bike racks adjacent to the medical office building. In addition, pedestrian access would be provided from Towne Centre Drive.
Policy 4.3: Improve pedestrian access from neighborhoods to commercial areas.	**Consistent.** Pedestrian access to the proposed medical office building would be provided from Towne Centre Drive. Pedestrian access would be facilitated by a designated pedestrian walkway linking the public sidewalk on Towne Centre Drive with the medical office entrance. Another designated pedestrian walkway would link the parking area on the east side of the medical office building with the building entrance.
Goal 5.0: Convenient and suitable parking facilities for motorized and non motorized vehicles.	**Consistent.** The project includes parking spaces that would surround the medical office on all four sides. The number of parking spaces provided would be consistent with the minimum requirements outlined in the City's Parking Ordinance.
Policy 5.1: Require sufficient off street parking for all land uses and maximize the use of parking facilities in Lake Forest.	**Consistent.** The project includes parking spaces that would surround the medical office on all four sides. The number of parking spaces provided would be consistent with the minimum requirements outlined in the City's Parking Ordinance.
Policy 5.3: Promote the provision of access between the parking areas of adjacent properties along arterial roadways to improve overall traffic flow.	**Consistent.** Vehicular access would be provided from Towne Centre Drive. The primary driveway to the proposed project site would form an intersection between the site driveway and Auto Center Drive (north–south) and Towne Centre Drive (east–west). A second access point would be located on the west side of the project site.
Safety and Noise Element	
Goal 1.0: Reduction in the risk to the community from hazards associated with geologic conditions, seismic activity and flooding.	**Consistent.** All applicable guidelines, including compliance with the California Building Code (CBC), accepted industry standards, and other regional and local regulations that address seismic and geologic hazards, are incorporated into project building plans. In addition, **t**he project includes bio-retention basins that would be sized to accommodate the increased storm water runoff and prevent on-site and off-site flooding.
Policy 1.1: Reduce the risk of impacts of geologic and seismic hazards.	**Consistent.** All applicable guidelines, including compliance with the California Building Code (CBC), accepted industry standards, and other

Table 4.10.A: General Plan Consistency Analysis

Select General Plan Policies	Consistency Analysis
	regional and local regulations that address seismic and geologic hazards, are incorporated into project building plans.
Policy 1.2: Protect the community from flooding hazards.	**Consistent.** The project includes bio-retention basins that would be sized to accommodate the increased storm water runoff and prevent on-site and off-site flooding.
Goal 5.0: Consideration of the effects of noise in land use planning.	**Consistent.** Project construction would comply with the construction hours specified in the City's Municipal Code. The proposed project would not result in significant operational noise impacts to adjacent land uses.
Policy 5.1: Utilize noise land use compatibility standards as a guide for future planning and development decisions.	**Consistent.** Project construction would comply with the construction hours specified in the City's Municipal Code. The proposed project would not result in significant operational noise impacts to adjacent land uses.
Goal 7.0: Reduction in non-transportation noise impacts.	**Consistent.** The proposed project would not result in significant operational noise impacts to adjacent land uses.
Policy 7.1: Minimize the impacts of noise-producing land uses and activities on noise-sensitive land uses.	**Consistent.** Project construction would comply with the construction hours specified in the City's Municipal Code. The proposed project would not result in significant operational noise impacts to adjacent land uses. In addition, other than the adjacent medical office buildings, there are no noise sensitive uses in the project vicinity.

Table 4.10.B: Zoning Ordinance Consistency Analysis

City of Lake Forest, Foothill Ranch Planned Community, Commercial Site Development Standards	Project Consistency Analysis
Height. 160 feet maximum.	**Consistent.** The proposed building would be a maximum of 26 feet in height.
Setbacks. ▪ 10 feet from property line abutting a street. ▪ No minimum from commercial, urban activity, and industrial planning areas.	**Consistent.** The proposed medical office buildings would be consistent with all setback requirements.
Lighting. All lighting, exterior and interior, shall be designed and located to confine direct rays to the premises.	**Consistent.** Project lighting would be designed to be contained within the project site, and spill light and glare would be minimized by design features (e.g., light shielding) to be implemented with the project.
Loading. All loading shall be performed onsite. Loading platforms and areas shall be screened from view from adjacent streets, highways, and residential areas.	**Consistent.** The loading area would be screened from view from the adjacent streets and highway.
Trash and storage areas. All storage, including cartons, containers or trash, shall be shielded from view within a building or area enclosed by a wall not less than six (6) feet in height.	**Consistent.** All outdoor trash storage areas would be enclosed by screens or wall not less than six (6) feet in height.
Enclosed uses. All uses permitted together with their resulting products shall be contained entirely within a completely enclosed structure, except for off-street parking and loading areas, areas for sale of nursery stock, automobile washing areas, and outdoor dining areas, or other similar uses indicated on the approved Site Plan.	**Consistent.** All medical office related uses would be contained within the proposed building, with the exception of parking, loading area, and outdoor patio area.
Screening. ▪ Streets and intersections: Screening along all streets and boundaries shall have a height of not less than thirty-six (36) inches nor more than forty-two (42) inches within twenty (20) feet of the point of intersection of: (1) A vehicular accessway or driveway and a street. (2) A vehicular accessway or driveway and a sidewalk. (3) Two or more vehicular accessways, driveways, or streets. ▪ Parking areas abutting arterial highways: A screen shall be installed along all parking areas abutting arterial highways. Except as otherwise provided below, the screening shall have a total height of not less than thirty-six (36) inches and not more than forty-two (42) inches. ▪ Notwithstanding the requirements listed above, where the finished elevation of the property at the boundary line, or within five (5) feet inside the boundary line, is lower than an abutting property elevation, such change in elevation may be in lieu of, or in combination with additional screening to satisfy the screening requirements of this section. ▪ A screen as referred to in a., b., and c. above shall consist of one or any combination of the following: (1) Walls including retaining walls: A wall shall consist of concrete, stone, brick, tile, or similar type of solid masonry material a minimum of six (6) inches thick. (2) Berms: a berm shall be constructed of earthen materials and it shall be landscaped. (3) Fences, solid: A solid fence shall be constructed of wood or other materials a minimum nominal thickness of two (2) inches and it shall form an opaque screen. (4) Landscaping: Vegetation, consisting of evergreen or deciduous trees or shrubs. ▪ **Mechanical equipment:** Mechanical equipment placed on any	**Consistent.** The project includes landscaping to shield the project site from Lake Forest Drive, Towne Centre Drive, and SR-241. The screening would comply with the applicable height requirements.

Table 4.10.B: Zoning Ordinance Consistency Analysis

City of Lake Forest, Foothill Ranch Planned Community, Commercial Site Development Standards	Project Consistency Analysis
roof such as, but not limited to, air conditioning, heating, ventilation ducts and exhaust, shall be screened from view from any abutting street or highway and any abutting area zoned for residential or open space uses within the Foothill Ranch P.C.	
Landscaping. Landscaping, consisting of evergreen or deciduous trees, shrubs, ground cover, or hardscape shall be installed and maintained subject to the following standards: ▪ Boundary landscaping abutting arterial highways is required to an average depth of fifteen (15) feet with a minimum depth of five (5) feet. ▪ Boundary landscaping abutting public streets, other than arterial highways, is required to an average depth of ten (10) feet with a minimum depth of five (5) feet. ▪ An additional amount, equal to at least five (5) percent of the net usable area of the parcel, is required and a minimum of fifty percent (50%) of such landscaping shall be located in the area devoted to parking. ▪ Separation: Any landscaped area shall be separated from an adjacent vehicular area by a wall or curb at least six (6) inches higher than the adjacent vehicular area or shall in some manner be protected from vehicular drainage. ▪ Watering: Permanent automatic watering facilities shall be provided for all landscaped areas. ▪ Maintenance: All landscaping shall be maintained in a neat, clean and healthy condition. This shall include proper pruning, mowing of lawns, weeding, removal of litter, fertilizing, replacement of plants when necessary and the regular watering of all plantings.	**Consistent.** Boundary landscaping would comply with the applicable depth requirements. Landscaping would comprise at least five percent of the net usable area and a minimum of 50 percent of this landscaping would be in parking areas. The landscaping areas adjacent to vehicular areas would be separated by a wall of at least six inches. The irrigation system for the landscaping would consist of low-volume spray heads or bubblers connected to an automatic irrigation control system. All landscaping would be maintained.

4.11 Mineral Resources *Would the project:*		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☐	☒
(b)	Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local General Plan, specific plan or other land use plan?	☐	☐	☐	☒

Discussion:

a) **No Impact.** As shown on the City's Mineral Resource Area Map (General Plan, Recreation and Resources Element), one area in the City is classified as an important Mineral Resource Zone (MRZ-2) for PCC-grade aggregate by the State Department of Conservation. The 62 ac area is located at the southwest corner of Santa Margarita Parkway, approximately 0.4 mi southwest of the project site. The MRZ-2 classification indicates that the area has significant mineral deposits or a high likelihood of their presence exists. PCC (Portland cement concrete) grade aggregate is used for a variety of construction uses.

As previously stated, the project site is currently undeveloped. There are no oil or other mineral extraction activities occurring on the site. In addition, the project site is not located in or near an important mineral resource zone. Therefore, the proposed project would not result in the loss of availability of known mineral resources that would be of value to the residents of the State. No mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

b) **No Impact.** As stated above, no known commercially valuable mineral resources exist on or near the project site. In addition, the project site is not identified on a local General Plan, Specific Plan, or other land use plan as the location of a locally important mineral resource. The proposed project would not result in the loss of a locally important mineral resource. No significant impacts related to mineral resources would result from project implementation, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

4.12 Noise *Would the project result in:*		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Exposure of persons to or generation of noise levels in excess of standards established in the local General Plan or noise ordinance, or applicable standards of other agencies?	☐	☒	☐	☐
(b)	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☒	☐
(c)	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☒	☐
(d)	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☒	☐	☐
(e)	For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
(f)	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion:

Impact Analysis:

a) **Less Than Significant with Mitigation Incorporated.** A project would normally have a significant effect on the environment related to noise if it would substantially increase the ambient noise levels for adjoining areas or conflict with the adopted environmental plans and goals of the community in which it is located. The City General Plan (Safety and Noise Element) and the City's Municipal Code (Chapter 11.16, Noise Control) establish noise standards for the City.

General Plan Safety and Noise Element. The City General Plan Safety and Noise Element, requires consideration of the sources and recipients of noise early in the land use planning process, for an effective method of minimizing the impacts of noise on the community's population. Areas already impacted by noise can also have noise reduced through rehabilitative improvements. The standards shown in Table 4.12.A represent the maximum allowable noise level for the identified uses and are used by the City to determine noise impacts associated with implementation of projects.

Table 4.12.A: City of Lake Forest Interior and Exterior Noise Standards

Land Use	Noise Standards	
	Interior	Exterior
Residential – Single-family, multifamily, duplexes, mobile homes	CNEL 45 dB	CNEL 65 dB
Residential – Transient lodging hotels, motels, nursing homes, hospitals	CNEL 45 dB	CNEL 65 dB
Private offices, church sanctuaries, libraries, board rooms, conference rooms, theaters, auditoriums, concert halls, meeting halls, etc.	L_{eq}(12) 45 dBA	–
Schools	L_{eq}(12) 45 dBA	CNEL 65 dB
General offices, reception, clerical, etc.	L_{eq}(12) 50 dBA	–
Bank lobbies, retail stores, restaurants, typing pools, etc.	L_{eq}(12) 55 dBA	–
Manufacturing, kitchens, warehousing, etc.	L_{eq}(12) 65 dBA	–
Parks, playgrounds, etc.	–	CNEL 65 dB
Golf courses, outdoor spectator sports facilities, amusement parks, etc.	–	CNEL 70 dB

Source: City of Lake Forest General Plan, 2011.
CNEL = community noise equivalent level dB = decibel L_{eq} = equivalent continuous noise level

Municipal Code. The Noise Control Chapter of the City Municipal Code (Noise Ordinance), is designed to protect people from nontransportation (stationary) noise sources such as music, construction activity, machinery and pumps, and air conditioners. The Noise Ordinance sets limits on the level and the duration of time a stationary noise source may impact a residential use. The louder the level becomes, the shorter the time becomes that it is allowed to occur. Table 4.12.B lists the A-weighted decibel (dBA) noise level and the maximum cumulative period of time that the noise level may occur during a 1-hour period. The ordinance applies different criteria during different time periods. The noise criteria are much more stringent in late night and early morning hours and reflect a heightened sensitivity to noise during these time periods.

Table 4.12.B: City of Lake Forest Noise Ordinance

Noise Level, dBA		Maximum Cumulative Duration
Daytime Ordinance (7:00 a.m.–10:00 p.m.)		
Exterior Noise	**Interior Noise**	
75	65	Not to be exceeded at any time
70	60	1 minute
65	55	5 minutes
60	--	15 minutes
55	--	30 minutes
Nighttime Ordinance (10:00 p.m.–7:00 a.m.)		
70	55	Not to be exceeded at any time
65	50	1 minute
60	45	5 minutes
55	--	15 minutes
50	--	30 minutes

Source: City of Lake Forest Municipal Code, Chapter 11.16.020.
dBA = A-weighted Decibel

The City's Noise Ordinance also governs the time of day that construction work can be conducted. The Noise Ordinance prohibits construction, repair, remodeling, and grading between the hours of 8:00 p.m. and 7:00 a.m. on weekdays and Saturdays, or at any time on Sunday or a federal holiday.

Short-Term Construction Noise Impacts. Short-term noise impacts would be associated with excavation, grading, and the erection of buildings on site during construction of the proposed project. Construction-related short-term noise levels would be higher than existing ambient noise levels in the project area at the present time, but would no longer occur once construction of the project is completed.

Two types of short-term noise impacts could occur during construction of the proposed project. First, construction crew commutes and the transport of construction equipment and materials to the site for the proposed project would incrementally increase noise levels on access roads leading to the site. A relatively high single-event noise exposure potential would exist at a maximum level of 87 dBA maximum instantaneous noise level (L_{max}) with trucks passing at 50 ft. However, the projected construction traffic would be minimal when compared to the existing traffic volumes on Lake Forest Drive, SR-241, and other adjacent roads, and its associated noise level change would not be perceptible. Therefore, short-term construction-related worker commutes and equipment transport noise impacts would be less than significant.

The second type of short-term noise impact is related to noise generated during excavation, grading, and construction on site. Construction is performed in discrete steps, each of which has its own mix of equipment, and consequently its own noise characteristics. These various sequential phases would change the character of the noise generated on site. Therefore, the noise levels vary as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction-related noise ranges to be categorized by work phase. Table 4.12.C lists maximum noise levels recommended for noise impact assessments for typical construction equipment based on a distance of 50 ft between the equipment and a noise receptor. Typical maximum noise levels range up to 89 dBA at 50 ft during the noisiest construction phases. The site preparation phase, which includes excavation and grading of the site, tends to generate the highest noise levels because the noisiest construction equipment is earthmoving equipment. Earthmoving equipment includes excavating machinery such as backfillers, bulldozers, draglines, and front loaders. Earthmoving and compacting equipment includes compactors, scrapers, and graders. Typical operating cycles for these types of construction equipment may involve 1–2 minutes of full power operation followed by 3–4 minutes at lower power settings.

Table 4.12.C: Typical Maximum Construction Equipment Noise Levels (L_{max})

Type of Equipment	Range of Maximum Sound Levels Measured (dBA at 50 ft)	Suggested Maximum Sound Levels for Analysis (dBA at 50 ft)
Pile Drivers, 12,000–18,000 ft-lb/blow	81–96	93
Rock Drills	83–99	96
Jack Hammers	75–85	82
Pneumatic Tools	78–88	85
Pumps	74–84	80
Dozers	77–90	85
Scrapers	83–91	87
Haul Trucks	83–94	88
Cranes	79–86	82
Portable Generators	71–87	80
Rollers	75–82	80
Tractors	77–82	80
Front-End Loaders	77–90	86
Hydraulic Backhoe	81–90	86
Hydraulic Excavators	81–90	86
Graders	79–89	86
Air Compressors	76–89	86
Trucks	81–87	86

Source: Noise Control for Buildings and Manufacturing Plants, Bolt, Beranek & Newman, 1987.
dBA = A-weighted decibels
ft = feet/foot
ft-lb/blow = foot-pounds per blow
L_{max} = maximum instantaneous noise level

Construction of the proposed project is expected to require the use of earthmovers, bulldozers, water trucks, and pickup trucks. This equipment would be used on site. Based on Table 4.12.C, the maximum noise level generated by each scraper on site is assumed to be 87 dBA L_{max} at 50 ft from the scraper. Each bulldozer would generate 85 dBA L_{max} at 50 ft. The maximum noise level generated by water and pickup trucks is approximately 86 dBA L_{max} at 50 ft from these vehicles. Each doubling of a sound source with equal strength increases the noise level by 3 dBA. Assuming that each piece of construction equipment operates at some distance from the other equipment, the worst-case combined noise level

during this phase of construction would be 91 dBA L_{max} at a distance of 50 ft from the active construction area. Construction activities for the proposed project would be located within 50 ft of the existing medical office buildings to the west. Maximum construction noise levels at the medical office adjacent to the proposed project site would range from 69–91 dBA L_{max}. Construction activity noise generated between 7:00 a.m. and 8:00 p.m. Monday through Saturday is exempt from the Noise Control Ordinance standards. Therefore, if construction is limited to the hours specified in the City's Noise Control Ordinance and Mitigation Measure N-1, noise generated during construction would not result in a significant impact.

Long-Term Traffic Noise Impacts.

Noise Impacts on Neighboring Sensitive Uses due to Proposed Project. The Federal Highway Administration (FHWA) highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate traffic-related noise conditions along roadway segments in the project vicinity. This model requires various parameters, including traffic volumes, vehicle mix, vehicle speed, and roadway geometry to compute typical equivalent noise levels during daytime, evening, and nighttime hours. Based on the traffic study conducted for the proposed project, the project-related net increase in vehicular trips is anticipated to be 1,301 trips per day. Traffic noise levels were weighted and summed over a 24-hour period in order to determine the CNEL values of any increase in noise.

Tables 4.12.D and 4.12.E show the change in noise levels due to the projected project traffic. These noise levels represent worst-case scenarios, which assume that no shielding is provided between the traffic and the location where the noise contours are drawn. The specific assumptions used in developing these noise levels and model printouts are provided in Appendix F of this IS/MND.

Table 4.12.D: Existing Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (ft)	Centerline to 65 CNEL (ft)	Centerline to 60 CNEL (ft)	CNEL (dBA) 50 ft from Outermost Lane
Towne Centre Drive					
West of Bake Parkway	10,910	<50	82	171	65.8
Between Bake Parkway and Lake Forest Drive	7,000	<50	63	128	63.8
East of Lake Forest Drive	7,580	<50	66	135	64.2
Lake Forest Drive					
North of Towne Centre Drive	12,330	<50	105	221	67.4
Between Towne Centre Drive and SR-241	18,700	67	137	290	69.3
SR-241	43,000	174	367	788	75.1

Source: LSA Associates, Inc., July 2011.
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
ft = feet SR-241 = State Route 241

Table 4.12.E: Existing plus Project Traffic Noise Levels

Roadway Segment	ADT	Centerline to 70 CNEL (ft)	Centerline to 65 CNEL (ft)	Centerline to 60 CNEL (ft)	CNEL (dBA) 50 ft from Outermost Lane	Increase CNEL (dBA) 50 ft from Outermost Lane
Towne Centre Drive						
West of Bake Parkway	10,980	<50	83	172	65.8	0.0
Between Bake Parkway and Lake Forest Drive	7,630	<50	66	136	64.2	0.4
East of Lake Forest Drive	7,580	<50	66	135	64.2	0.0
Lake Forest Drive						
North of Towne Centre Drive	12,740	<50	107	225	67.6	0.2
Between Towne Centre Drive and SR-241	19,200	68	139	296	69.4	0.1
SR-241	43,000	174	367	788	75.1	0.0

Source: LSA Associates, Inc., July 2011.
ADT = average daily traffic
CNEL = Community Noise Equivalent Level
dBA = A-weighted decibel
ft = feet SR-241 = State Route 241

Noise impacts can be described in three categories. The first is audible impacts that refer to increases in noise levels noticeable to humans. Audible increases in noise levels generally refer to a change of 3.0 dB or greater because this level has been found to be barely perceptible in exterior environments. The second category, potentially audible, refers to a change in the noise level between 1.0 and 3.0 dB. This range of noise levels has been found to be noticeable only in laboratory environments. The last category is changes in noise levels of less than 1.0 dB, which are inaudible to the human ear. Only audible changes (i.e., 3.0 dB or greater) in existing ambient or background noise levels are considered potentially significant.

As shown in Table 4.12.E, the project-related traffic results in increases of less than 1 dBA. This increase is considered to be less than significant.

On-Site Traffic Noise Impacts. The proposed medical office building would be located approximately 140 ft from the centerline of Towne Centre Drive, 300 ft from the centerline of Lake Forest Drive, and 400 ft from the centerline of SR-241. Based on the noise levels listed in Table 4.12.D, the proposed project would be exposed to noise levels of up to 60 dBA CNEL from traffic on Towne Centre Drive, 58 dBA CNEL from traffic on Lake Forest Drive, and 64 dBA CNEL from traffic on SR-241. These levels are lower than the City's 65 dBA CNEL standard for hospitals.[15] Therefore, no mitigation would be required to reduce noise impacts to proposed on-site land uses.

A 3 dBA change in noise is perceptible to the average human ear in an outdoor environment. To experience a 3 dBA increase in traffic noise, the traffic volume along SR-241 would have to double to 86,000 vehicles per day. Therefore, as a worst-case condition, should the traffic volumes along SR-241 double in the future to 86,000 daily trips, the traffic noise level at the proposed building would increase by 3 dBA to 67 dBA CNEL, exceeding the City's 65 dBA CNEL exterior noise standard. However, the proposed project does not include any sensitive outdoor uses. Standard construction in Southern California would provide a minimum to 24 dBA of noise attenuation with windows closed. This attenuation would reduce the future interior noise level to 43 dBA CNEL, below the City's 45 dBA

[15] While the proposed project is not a hospital use and, therefore, would not be as sensitive to noise as a hospital, the exterior noise standard for hospital uses is used in this analysis because it is the most appropriate, and most conservative, standard available.

CNEL interior noise standard. As the project buildings would be equipped with mechanical ventilation, no additional mitigation measures would be required.

Long-Term Stationary Noise Impacts. The proposed project includes the construction of a medical office building. The primary on-site noise-generating activity would be the parking lot. Representative parking activities, such as persons conversing and slamming doors, would generate approximately 60–70 dBA L_{max} at 50 ft. The medical office buildings to the west of the proposed parking lots are located at a distance of approximately 60 ft, where they would be exposed to parking lot noise of up to 68 dBA L_{max}. This level is less than the City's 70 dBA L_{max} nighttime noise threshold. No mitigation measures would be required.

Heating, ventilation, and air-conditioning (HVAC) equipment generates a sound pressure level (SPL) of up to 95 dBA at 1 m (3.28 ft). The roof edge creates a natural noise barrier that reduces noise levels from these rooftop HVAC units by 8 dBA or more. The closest off-site land uses to the HVAC equipment would be located at a distance of 60 ft and would experience a noise level of 62 dBA L_{max}. This noise level would not exceed the City's nighttime maximum noise level of 70 dBA L_{max}. Therefore, noise generated from HVAC equipment uses would be less than significant, and no mitigation is required.

Significance Determination: Potentially Significant.

Mitigation Measure:

N-1 **Construction Noise Limits.** Prior to commencement of grading activities and issuance of building permits, the City of Lake Forest Director of Development Services, or designee, shall verify that the following notes appear on grading and construction plans:

1. During all site excavation and grading, the project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards.
2. The project contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors (i.e., uses west of the project site) nearest the project site.
3. The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors (i.e., uses west of the project site) nearest the project site during all project construction.
4. Construction shall be limited to the hours of 7:00 a.m. to 8:00 p.m. Monday through Saturday. In accordance with City standards, no construction activities are permitted outside of these hours, and no construction is permitted on Sundays or a federal holiday without a special work permit.

Significance Determination After Mitigation: Less than Significant

b) **Less Than Significant Impact.** Construction of the proposed project would not require the use of pile drivers. Therefore, the primary source of vibration during the construction phase would be heavy earthmoving equipment. Based on Table 18 from the Caltrans Transportation and Construction-Induced Vibration Manual (2004), it is estimated that the on-site construction equipment would generate vibration levels of up to 0.089 inch per second (in/sec) at a distance of 25 ft. Construction activities for the proposed project would be located within 50 ft of the medical office uses to the west of the project site. Using Equation 12 from the Vibration Guidance Manual, the vibration level at this medical office would be 0.042 in/sec. This level would not exceed the 0.1 in/sec threshold below which there is virtually no

risk of resulting in architectural damage to normal buildings. In addition, this level is less than the 0.05 in/sec level that is distinctly perceptible to humans. Therefore, construction of the proposed project would not result in substantial groundborne vibration or groundborne noise on properties adjacent to the project site. Similarly, project operation would not generate substantial groundborne noise or vibration. Therefore, groundborne noise and vibration impacts are considered less than significant, and no mitigation measures are required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

c) **Less Than Significant Impact.** Development of the proposed project site will result in an increase in daily traffic trips in the project vicinity over existing conditions; therefore, there will be a potential increase in traffic noise along access roads leading to the project site. However, as described in Response 4.12.a, the increase would be less than significant.

The proposed project includes the construction of a medical office building. The primary on-site noise-generating activity will be parking lot activities. The medical office buildings to the west of the proposed parking lots are located at a distance of approximately 60 ft, where they would be exposed to parking lot noise of up to 68 dBA L_{max}. This level is less than the City's 70 dBA L_{max} nighttime noise threshold. No mitigation measures would be required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

d) **Less Than Significant with Mitigation Incorporated.** Although there would at times be high intermittent construction noise in the project area during project construction, construction of the project would not significantly affect land uses adjacent to the project site. In addition, construction at the project site would comply with the hourly limits specified by the City's Noise Control Ordinance and Mitigation Measure N-1. Therefore, any potential impact would be mitigated to a level that is less than significant.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

e) **No Impact.** The proposed project is located approximately 12 mi from John Wayne International Airport. At this distance, the project site is not located within the 65 dBA CNEL airport noise contour. Therefore, no impacts related to excessive airport noise are anticipated, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

f) **No Impact.** The project site is not located within the vicinity of a private airstrip. Please also refer to Response 4.12.e above. Therefore, there are no impacts related to this issue, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

4.13 Population and Housing *Would the project:*		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	☐	☐	☒	☐
(b)	Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
(c)	Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion:

a) **Less than Significant Impact.** Since the proposed project is not a residential project but rather a medical office building and parking lot, direct population growth caused by the project is not expected. Construction of the proposed project may employ people who choose to move to the City for the purposes of working in the medical field; however, most employees are expected to come from the existing City population and that of the surrounding communities. Therefore, the proposed project would not induce substantial population growth in the area either directly or indirectly, and no mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

b) **No Impact.** The project site is currently vacant. No housing units are located on site, and housing displacement impacts would not occur as a result of project implementation. Therefore, the proposed project would not result in an impact related to housing displacement, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

c) **No Impact.** The project site is currently vacant. No housing units or other forms of temporary housing are located on site, and no people would be displaced as a result of project implementation. Therefore, the proposed project would not result in an impact related to the displacement of people, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

4.14 Public Services *Would the project:*	Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a) Would the project result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
i) Fire Protection?	☐	☐	☒	☐
ii) Police Protection?	☐	☐	☒	☐
iii) Schools?	☐	☐	☐	☒
iv) Parks?	☐	☐	☐	☒
v) Other public facilities?	☐	☐	☐	☒

Discussion:

a)

i.) **Less than Significant Impact.** The Orange County Fire Authority (OCFA) provides fire and emergency services throughout the City. The OCFA is a regional fire service agency that provides structure fire protection, emergency medical and rescue services, hazardous inspections and response, and public education activities to almost 1.4 million residents in 22 cities and all unincorporated areas in Orange County. The OCFA consists of 61 fire stations. The closest fire station is Station 54, located 0.42 mi from the project site at 19811 Pauling Avenue. OCFA consists of divisions, eight battalions, 62 fire stations, 814 firefighters, 6 executive chiefs, and 252 professional staff. In addition, the OCFA has 475 authorized reserve firefighters. In 2009, the OCFA responded to 85,787 emergency calls with 163,050 unit responses. Response times in the City vary based on the level of emergency. According to the 2009/2010 budget report for OCFA, the service ratio of firefighters to residents has remained relatively constant, while emergency call loads have increased by approximately 30 percent; however, between 2001 and 2009, the average response time for emergency calls has remained relatively constant, at a little over 5 minutes per call, which is considered adequate.

According to the OCFA Fire Hazard Map, as well as the Statewide CalFire Map, the proposed project is not located in an area designated as a Special Fire Protection Area or within an area designated by the state as a Fire Hazard Severity Zone. In addition, according to the City General Plan Safety and Noise Element, the project site is not located in an Area of Fire Hazard.

Fire Department access would be available from Towne Centre Drive. Phase 1 would include the installation of a gravel "ring road" to provide adequate emergency access prior to development to Phase 2 (refer to Figure 2.3a). There are two existing fire hydrants located along Towne Centre Drive adjacent to the project site. In addition, Phase 2 would include installation of a new fire hydrant to be located in the southwest corner of the project site. A sprinkler system would also be installed in the proposed MOB for fire control purposes. The project would comply with all Fire Department access requirements and California Fire Code requirements for the placement of fire hydrants and the use of sprinkler systems. Project compliance with requirements set forth in the Fire Code would provide fire protection for people and structures, as well as the provision of emergency medical services on site.

The proposed project is a medical office building, which would increase the number of on-site visitors and personnel, thereby incrementally increasing demand for fire and emergency medical services. Any increase in demand could be accommodated by existing personnel and Fire Department facilities. In addition, the proposed project would not result in a significant traffic impact to any study area intersections. Therefore, the proposed project would not impair emergency response vehicles, and average response times in the area would remain within acceptable response time limits.

In summary, the proposed project would be designed to comply with all Fire Department access requirements and California Fire Code requirements, would not impair emergency response vehicles or increase response times, and would not substantially increase calls for service. Therefore, with project implementation, the response profile for the project area would remain unchanged in terms of service delivery, staffing requirements, facilities, and equipment. The Fire Department would be able to service the proposed project at the same levels provided to this area of the City before project implementation, and impacts to fire protection services are expected to be less than significant as a result of project implementation. In addition, the project would not require new or physically altered public facilities for fire protection. No mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

ii) **Less than Significant Impact.** The Orange County Sheriff's Department (OCSD) is responsible for providing law enforcement protection within unincorporated areas of Orange County, as well as incorporated cities, such as the City of Lake Forest, that contract with the OCSD for protection. The Orange County Sheriff's Department has approximately 3,800 sworn and professional staff members and over 800 reserve personnel. The proposed project is located within the service area of the South Orange County Sheriff's Department substation in Aliso Viejo. Additionally, management staff is stationed at Lake Forest City Hall to assist in the management of criminal activity and administer crime prevention programs in the City.

The City and the project site are currently served by the OCSD Community Policing Center located at 25550 Commercentre Drive, which is responsible for public safety and general law enforcement, including patrol services, traffic enforcement, and criminal investigation. The Police Services Department also provides a variety of community policing programs for the public, including crime prevention, community awareness, crossing guards, neighborhood watch, business watch, and the community police trailer. The Police Services Department has established service goals and response times for emergency calls. It is the goal of the City to work with the OCSD to ensure that service corresponds to the number of residents and businesses in the City as well as current crime problems. Average response times range from 7 minutes, 21 seconds for Priority 1 calls to 21 minutes, 30 seconds for Priority 3 calls. These are considered adequate response times for the project site and the OCSD.

The proposed project would likely create a slight increase in police presence due to the increase in visitors/patrons of businesses on site, but project impacts on policing demand, given the size of the project and proposed uses, would be less than significant. In addition, the project would not require new or physically altered public facilities for police protection. No mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

iii) **No Impact.** The City is served by the Saddleback Valley Unified School District. The proposed project is a medical office project. As stated in Section 4.13, the proposed project would not induce population growth, generate an increased demand for school facilities, or require the construction of school facilities. Nevertheless, the proposed project would be required to pay local school facility fees authorized by the Leroy F. Greene School Facilities Act of 1998 (California Government Code 65996). Therefore, the proposed project would have no impact on the Saddleback Valley Unified School District, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

iv) **No Impact.** The proposed project is a commercial medical office development. As stated in Section 4.13, the proposed project would not induce population growth. As such, the proposed project would not generate an increased demand for parks, nor does the project include the construction of park facilities. Therefore, it is not anticipated that parks or the availability of parks within the City would be affected by project implementation, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

v) **No Impact.** The proposed project is a commercial medical office building. The proposed project would not induce population growth that would generate an increased demand for public facilities (e.g., libraries, City storage). Therefore, the proposed project would not impact other public facilities in the City, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is required

Significance Determination After Mitigation: No Impact

4.15 Recreation *Would the project:*		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
(b)	Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion:

a) **No Impact.** The proposed project involves construction of a medical office building and associated parking area. As stated in Section 4.13 Population and Housing, the proposed project would not induce population growth that would generate an increased demand for recreation facilities such that physical deterioration would occur or be accelerated. Therefore, it is not anticipated that the recreation facilities within the City would be affected by project implementation, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

b) **No Impact.** The proposed project involves construction of a medical office building and associated parking. The proposed project does not include recreational facilities. In addition, the proposed project would not induce population growth that would generate an increase in demand for recreational facilities. Therefore, the proposed project would not require the construction or expansion of recreational facilities. It is not anticipated that recreation facilities or the availability of recreation resources within the City would be affected by project implementation, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

4.16 Transportation/Traffic *Would the project:*		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and nonmotorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☒	☐
(b)	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☒	☐
(c)	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
(d)	Substantially increase hazards due to a design feature (e. g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☒	☐
(e)	Result in inadequate emergency access?	☐	☐	☐	☒
(f)	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	☐	☐	☐	☒

Discussion:

a) **Less than Significant Impact.** Roadway performance is most often controlled by the performance of intersections, specifically during peak traffic periods. This is because traffic control at intersections interrupts traffic flow that would otherwise be relatively unimpeded except for the influences of on-street parking, access to adjacent land uses, or other factors resulting in interaction of vehicles between intersections. For this reason, traffic analyses for individual projects typically focus on peak-hour operating conditions for key intersections rather than roadway segments. Operating conditions at intersections are typically described in terms of Level of Service (LOS). LOS is a measure of a roadway's operating performance and is a tool used in defining thresholds of significance. It is described with a letter designation from A to F, with LOS A representing the best operating conditions and LOS F the worst. LOS D is the performance standard for the roadway signalized intersections in the study area as adopted by the City and Orange County Transportation Authority (OCTA) as part of the County's Congestion Management Program (CMP).

In conformance with the CMP requirements, a.m. and p.m. peak-hour operating conditions for the key signalized study intersections were evaluated using the Intersection Capacity Utilization (ICU) methodology. The a.m. and p.m. peak-hour operating conditions for the key study intersections were evaluated using the Intersection Capacity Utilization (ICU) Methodology for signalized intersections and Chapter 17 of the Highway Capacity Manual 2000 (HCM 2000) for unsignalized intersections.

The ICU methodology is intended for signalized intersection analysis and estimates the volume-to-capacity (v/c) relationship for an intersection based on the individual v/c ratios for key conflicting traffic movements. The ICU numerical value represents the percent signal (green) time and thus capacity, required by existing and/or future traffic. The ICU value translates to an LOS estimate, which is a relative measure of the intersection performance. The ICU value is the sum of the critical v/c ratios at an intersection; it is not intended to be indicative of the LOS of each of the individual turning movements.

The six qualitative categories of LOS for signalized have been defined along with the corresponding ICU value range and are shown in Table 4.16.A.

Table 4.16.A: Level of Service Criteria for Signalized Intersections (ICU Methodology)

LOS	Intersection Capacity Utilization Value (v/c)	Level of Service Description
A	≤0.60	EXCELLENT. No vehicle waits longer than one red light and no approach Phase 1s fully used.
B	0.61–0.70	VERY GOOD. An occasional approach Phase 1s fully utilized; many drivers begin to feel somewhat restricted within groups of vehicles.
C	0.71–0.80	GOOD. Occasionally drivers may have to wait through more than one red light; backups may develop behind turning vehicles.
D	0.81–0.90	FAIR. Delays may be substantial during portions of the rush hours, but enough lower volume periods occur to permit clearing of developing lines, preventing excessive backups.
E	0.91–1.00	POOR. Represents the most vehicles intersection approaches can accommodate; may be long lines of waiting vehicles through several signal cycles.
F	≥1.00	FAILURE. Backups from nearby locations or on cross streets may restrict or prevent movement of vehicles out of the intersection approaches. Potentially very long delays with continuously increasing queue lengths.

Source: Focused Site Access Analysis (Linscott Law & Greenspan, April 2011).
ICU = Intersection Capacity Utilization
LOS = level of service
v/c = volume-to-capacity ratio

For all-way stop-controlled intersections (unsignalized), the HCM methodology estimates the average control delay for each of the subject movements and determines the LOS for each movement. The overall average control delay measured in seconds per vehicle and the LOS are then calculated for the entire intersection. The six qualitative categories of LOS for unsignalized intersections and the corresponding HCM control delay value range are shown in Table 4.16.B.

Table 4.16.B: Level of Service Criteria for Unsignalized Intersections (HCM Methodology)

LOS	HCM Delay Value (sec/veh)	LOS Description
A	≤10.0	Little or no delay
B	>10.0 and ≤15.0	Short traffic delays
C	>15.0 and ≤25.0	Average traffic delays
D	>25.0 and ≤35.0	Long traffic delays
E	>35.0 and ≤50.0	Very long traffic delays
F	>50.0	Severe congestion

Source: Focused Site Access Analysis (Linscott Law & Greenspan, April 2011).
HCM = Highway Capacity Manual
LOS = level of service
sec/veh = seconds per vehicle

The City considers LOS D to be the minimum acceptable condition that should be maintained during the a.m. and p.m. peak hours for all intersections. For this analysis, impacts to local and regional transportation systems are considered significant if the project would increase traffic demand at a key study area signalized intersection by greater than 1.0% of capacity (ICU increase > 0.01), causing or worsening LOS E or F (ICU > 0.090). Traffic impacts at key unsignalized study area intersections would be considered significant if the project would add greater than 1.0 second of delay at an intersection operating at LOS E or F.

An analysis of the Existing and Existing Plus Project conditions at six intersections in the vicinity of the proposed project and the proposed project driveways was completed to determine potential project impacts on the circulation system. The six key study intersections and one proposed driveway are listed below:

Signalized

1. Bake Parkway at Towne Centre Drive
2. Lake Forest Drive at Towne Centre Drive
3. Lake Forest Drive at SR-241 Northbound On-Ramp
4. Lake Forest Drive at SR-241 Southbound Off-Ramp
5. Driveway 2 at Towne Centre Drive (proposed as part of the project)

Unsignalized

6. Auto Center Drive (West) at Towne Centre Drive
7. Auto Center Drive (East) at Driveway 1 at Towne Centre Drive (proposed as part of the project)

To determine the number of trips that could be generated by the project, trip generation rates from the Institute of Transportation Engineers (ITE), *Trip Generation*, 8th Edition, were used (refer to Appendix G of this IS/MND). Table 4.16.C summarizes the trip generation rates used in forecasting the vehicular trips generated by the proposed project and presents the forecast daily and peak-hour project traffic volumes of a typical weekday. As shown in this table, the proposed project is forecast to generate 1,301 daily trips (50 percent arriving and 50 percent departing, with 83 trips (66 inbound, 17 outbound) produced in the a.m. peak hour and 125 trips (34 inbound, 91 outbound) produced in the p.m. peak hour on a typical weekday.

Table 4.16.C: Project Traffic Generation Rates and Forecast

Land Use	Daily	AM Peak Hour			PM Peak Hour		
		Enter	Exit	Total	Enter	Exit	Total
Trip Generation Factors: 720: Medical-Dental Office Building (TE/TSF)	36.13	1.82	0.48	2.30	0.93	2.53	3.46
Proposed Project Trip Generation Forecast: Medical Office Building (36,022 sf)	1,301	66	17	83	34	91	125

Source: Focused Site Access Analysis (Linscott Law & Greenspan, April 2011).
sf = square feet of gross floor area
TE/TSF = Trip ends per 1,000 square-feet of development

The existing a.m. and p.m. peak-hour traffic volumes for the six key study intersections evaluated in this section were collected by Transportation Studies, Inc. in October and November 2010 and January 2011. Existing plus project traffic volumes were developed by adding the project traffic to the existing traffic

volumes. Existing and existing plus project traffic volumes and LOS are shown in Table 4.16.D. As shown in this table, all six key study intersections currently operate at acceptable LOS B or better under existing condition. As also shown in this table, all six key study intersections are forecast to operate at acceptable LOS C or better for the existing plus project condition.

Table 4.16.D: Existing Conditions Peak-Hour Intersection Capacity Analysis Summary

Key Intersection	Time Period	Existing Condition		Existing with Project		ICU/Delay Increase	Significant Impact?
		ICU/Delay	LOS	ICU/Delay	LOS		
1. Bake Parkway at Towne Centre Drive	AM PM	0.699 0.508	B A	0.701 0.522	C A	0.002 0.014	No
2. Auto Center Drive (West) at Towne Centre Drive	AM PM	9.2 s/v 13.3 s/v	A B	9.3 s/v 13.6 s/v	A B	s/v 0.3 s/v	No
3. Auto Center Drive (East) at Driveway 1 at Towne Centre Drive	AM PM	8.7 s/v 10.5 s/v	A B	10.0 s/v 12.4 s/v	A B	1.3 s/v 1.9 s/v	No
4. Lake Forest Drive at Towne Centre Drive	AM PM	0.406 0.549	A A	0.420 0.549	A A	0.014 0.000	No
5. Lake Forest Drive at SR-241 Northbound On-Ramp	AM PM	0.295 0.354	A A	0.296 0.359	A A	0.001 0.005	No
6. Lake Forest Drive at SR-241 Southbound Off-Ramp	AM PM	0.403 0.466	A A	0.404 0.468	A A	0.001 0.002	No

Source: Focused Site Access Analysis (Linscott Law & Greenspan, April 2011).
ICU = Intersection Capacity Utilization
LOS = level of service
SR-241 = State Route 241
s/v = seconds per vehicle (delay)

Access to the project site would be provided via two driveways located along Towne Centre Drive. The easterly driveway (Driveway 1) is proposed as full -access and the westerly project driveway (Driveway 2) is proposed as right-in/right-out only. Table 4.16.E summarizes the LOS at the project driveways for existing with project conditions. As shown in this table, both project driveways are forecast to operate at acceptable LOS B or better during the a.m. and p.m. peak hours.

Table 4.16.E: Project Driveway Peak-Hour Capacity Analysis Summary

Key Intersection	Time Period	Existing with Project Traffic Condition	
		Delay	LOS
Auto Center Drive (East) at Driveway 1 at Towne Centre Drive	AM PM	10.0 s/v 12.4 s/v	A B
Driveway 2 at Towne Centre Drive	AM PM	8.8 s/v 9.5 s/v	A A

Source: Focused Site Access Analysis (Linscott Law & Greenspan, April 2011).
LOS = level of service s/v = seconds per vehicle (delay)

A stacking/storage analysis was performed for the existing eastbound left-turn lane at the intersection of Lake Forest Drive at Towne Centre Drive and for the westbound left-turn lane for the proposed access into the project site at the intersection of Auto Center Drive (East)/Driveway 1 and Towne Centre Drive. The queuing evaluation was based on the existing with project peak-hour traffic volumes and the HCM (2000) signalized and unsignalized methodology. Based on the HCM LOS calculations, which calculate

a critical (95th percentile) queue value in number of vehicles per lane, the maximum vehicle queue calculated for the eastbound left-turn lane at the intersection of Lake Forest Drive at Towne Centre Drive for the existing with project condition occurs during the p.m. peak hour. The vehicle queue for this eastbound left-turn lane is forecast to have a maximum queue of three vehicles, which equates to a queue length of 75 ft. The existing eastbound left-turn lane is 150-ft in length. Therefore, the proposed project would not result in substantial queuing impacts at this intersection. The maximum vehicle queue calculated for the intersection of Auto Center Drive (East)/Driveway 1 and Towne Centre Drive for the existing with project condition occurs during both the a.m. and p.m. peak hours. The vehicle queue for this westbound left-turn lane is forecast to have a maximum queue of one vehicle, which equates to a queue length of 25 ft. The existing westbound left-turn lane is 60 ft in length. Therefore, the proposed project would not result in significant queuing impacts at this intersection.

Because the six key study intersections would continue to operate at acceptable LOS under the existing plus project condition, the project would not result in an ICU increase greater than 0.01 at signalized intersections or add greater than 1.0 second of delay at an unsignalized intersection operating at LOS E or F, the proposed project would not conflict with any applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system. No mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

b) **Less than Significant Impact.** Refer to Response 4.14.a above. Because the six key study intersections would continue to operate at acceptable LOS under the existing plus project condition, the project would not result in an ICU increase greater than 0.01 at signalized intersections or add greater than 1.0 second of delay at an unsignalized intersection operating at LOS E or F, the proposed project would not conflict with an applicable congestion management program, including but not limited to LOS standards and travel demand measures, or other standards established by the County Congestion Management Agency for designated roads or highways. No mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

c) **No Impact.** The project site is not located within 10 miles of an airport or airfield. Therefore, the project site is not located in the vicinity of any airfields or airports and would not affect air traffic patterns.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

d) **Less than Significant.** The proposed project would not introduce any new roadways or introduce a land use that would conflict with existing land uses in the surrounding area. Vehicular access to the site would be provided from Towne Centre Drive. Project site access would be provided via two proposed

driveways. Curb cuts would be constructed to City standards. Internal vehicle queuing and stacking would not impact ingress and egress to the site because driveway throat lengths are sufficient. In addition, turning movements into and out of the project site at the project driveways are anticipated to operate at an acceptable LOS. Therefore, the proposed project would not substantially increase hazards due to a design feature (e. g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment), and no mitigation is required.

Significance Determination: Less Than Significant

Mitigation Measures: No Mitigation is required

Significance Determination After Mitigation: Less Than Significant

e) **No Impact.** Direct access for emergency vehicles would be provided via the project driveways on Towne Centre Drive. This street would remain open during construction, and project site access would be maintained. Therefore, implementation of the proposed project would not result in inadequate emergency access, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

f) **No Impact.** The project would not affect adopted policies supporting alternative transportation and would be subject to compliance with policies, plans, and programs of the City and other applicable agencies regarding alternative modes of transportation. Pedestrians accessing the project may utilize pedestrian facilities (e.g., sidewalks and crosswalks) that are part of the surrounding street system. A sidewalk is located along Towne Centre Drive and can be used to access the site. In addition, the proposed project would include bike racks adjacent to the medical office building. Lake Forest Drive, Bake Parkway, and Portola Parkway are served by transit facilities (OCTA Bus Routes 177 and 206) in the existing condition. A bus stop is located at Lake Forest Towne Centre at the corner of Towne Centre Drive and Lake Forest Drive, west of the project site. The project would not remove or relocate any alternative transportation access points. Therefore, the project does not conflict with adopted plans, policies, or programs supporting alternative transportation, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

4.17 Utilities/Service Systems *Would the project:*		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	☐	☐	☐	☒
(b)	Require or result in the construction of new water or wastewater treatment or collection facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☒	☐
(c)	Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☒	☐	☐
(d)	Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	☐	☐	☒	☐
(e)	Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	☐	☐	☒	☐
(f)	Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs?	☐	☐	☒	☐
(g)	Comply with federal, state, and local statutes and regulations related to solid wastes.	☐	☐	☐	☒

Discussion:

a) **No Impact.** The proposed project is not an industrial facility and is not subject to the wastewater treatment requirements of the Regional Water Quality Control Board (RWQCB). No impacts would occur, and no mitigation is required. Refer to Section 4.9 for a discussion of the storm water runoff.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

b) **Less than Significant Impact.** The City is served by the El Toro Water District, the Trabuco Canyon Water District, and The Irvine Ranch Water District (IRWD). IRWD would be the main water supply provider to the project site. The IRWD service area covers an area of 181 square miles, which includes the City of Irvine and portions of the Cities of Costa Mesa, Lake Forest, Newport Beach, Tustin, Santa Ana, Orange, and unincorporated Orange County. IRWD provides potable and nonpotable water supply and wastewater treatment services to a population of more than 330,000. In 2010, annual water demand in the IRWD service area was almost 120,000 acre-feet (af). Approximately 21 percent of IRWD's supply is recycled water.

IRWD is also the wastewater service provider for the project site. IRWD's sanitary sewer system conveys wastewater to two treatment plants through more than 800 mi of sewer distribution pipelines, the Michelson Water Recycling Plant in Irvine and the Los Alisos Water Recycling Plant in Lake Forest. The project site would be served by the Los Alisos Water Recycling Plant, which has a capacity of 7.5 million gallons per day (mgd). The Los Alisos Water Recycling Plant currently treats up to 5.5 mgd.

The project site is currently vacant, does not have an existing water demand, and does not generate wastewater. Based on IRWD's Land Use and Water Use Factors, it is estimated that the proposed project's water demand would be approximately 2,160 gallons/day (1,290 gal/day for Phase 1 and 870 gal/day for Phase 2). In addition, water demand for irrigation would be approximately 186 gal/day.[16] Based on a sewer generation rate of approximately 90 percent water consumption rates, the proposed project is anticipated to generate approximately 1,944 gal/day of wastewater.

The proposed project is consistent with the City's General Plan Land Use Designations. The relatively moderate increase in water use and wastewater generation would be accounted for in the build-out capacity of the General Plan and anticipated growth rates for the City. The project would not necessitate new or expanded water entitlements, and IRWD would be able to accommodate the increased demand for potable water. Therefore, project impacts associated with an increase in potable water demand are considered less than significant, and no mitigation is required.

Likewise, increased wastewater flows from the proposed project can be accommodated within the existing design capacity of the treatment plants that serve the City. Therefore, the proposed project would not require, nor would it result in, the construction of new water or wastewater treatment or collection facilities or expansion of existing facilities other than those facilities to be constructed on site, which could cause significant environmental effects. Project impacts related to the construction of water and wastewater treatment or collection facilities are less than significant, and no mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

c) **Less than Significant with Mitigation Incorporated.** As discussed in Section 4.9, Hydrology and Water Quality, the proposed project would increase impervious surface area on site, which would increase the volume of runoff from the site. However, the proposed project includes bio-retention basins to collect runoff from the site prior to discharge into the downstream storm drain system. As specified in Mitigation Measure WQ-4, the bio-retention basins would be designed to provide a storage volume greater than the required detention volume for Phase 1 of the project to ensure that the peak flow and volume of storm water runoff from the site are equal to or lower than existing conditions. As specified in Mitigation Measure WQ-5, BMPs would be incorporated into the design of Phase 2 to ensure that peak flow and volume of storm water runoff from the site are not increased compared to existing conditions. Because the volume runoff from the site would be equal to or lower than existing conditions with implementation of Mitigation Measures WQ-4 and WQ-5, the proposed project would not contribute additional runoff to the downstream storm water drainage facilities or cause the expansion of existing facilities. Therefore, impacts to storm water drainage facilities would be reduced to less than significant levels.

Significance Determination: Potentially Significant

Mitigation Measures: Refer to Mitigation Measures WQ-4 and WQ-5

Significance Determination After Mitigation: Less than Significant

[16] Based on a water demand of 60 gallons/1,000 square feet/day for the building and 300 gallons/acre/day for landscaping.

d) **Less than Significant Impact.** Refer to Response 4.17.b above. Although the project would increase water demand on site, IRWD would be able to accommodate the increased demand for potable water. Therefore, the project would have sufficient water supplies available to serve the project from existing entitlements and resources and would not require new or expanded entitlements. Therefore, impacts related to water supplies are less than significant, and no mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

e) **Less than Significant Impact.** Refer to Response 4.17.b above. Although the project would increase water demand on the site, the increased wastewater flows from the proposed project can be accommodated within the existing design capacity of the treatment plants that serve the City. Therefore, the wastewater treatment provider would have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. Therefore, impacts related to wastewater generation are less than significant, and no mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

f) **Less than Significant Impact.** The project site is located within OC Waste & Recycling's (OCWR) service area. OCWR administers the countywide Integrated Waste Management Plan. OCWR administers the countywide Integrated Waste Management Plan. OCWR owns and operates three active landfills and four household hazardous waste collection centers. All three landfills are permitted as Class III landfills. Class III landfills accept all types of nonhazardous municipal solid waste for disposal; however; no hazardous or liquid waste can be accepted. Trash in Lake Forest is collected by Waste Management of Orange County and disposed of in one of OCWRs landfills.

The Frank R. Bowerman Landfill, located in Irvine, is the closest OCWR landfill to the proposed project site and would be expected to provide waste disposal for the proposed project once operational. The Frank R. Bowerman Landfill, which is permitted to receive a daily maximum of no more than 11,500 tons of solid waste per day, is approximately 725 ac in size, 534 ac of which are permitted for refuse disposal. The landfill opened in 1990 and is scheduled to close in approximately 2053. The permitted capacity of the landfill is 127 million cubic yards. The landfill has a remaining air space capacity estimated at approximately 59.41 million cubic yards (46.8 percent of total capacity).

As stated in Section 4.8, the proposed project is not considered a large quantity medical waste generator (LQG) because it would generate less than 200 pounds of medical waste per month. The proposed project would be required to comply with the State Medical Waste Management Act (MWMA) (22 CCR Sections 65600–65628), which provides for regulation of medical waste generators, haulers, and treatment facilities (refer to Mitigation Measure HAZ-1). The MWMA requires that transportation of medical waste be undertaken by a registered medical waste hauler. Nonhazardous waste may be disposed

of at the Frank R. Bowerman Landfill. The proposed project is expected to generate approximately 895[17] pounds per day of solid waste (579 pounds per day for Phase 1 and 316 pounds per day for Phase 2). Solid waste generated by the proposed project would not exceed the capacity of the Frank R. Bowerman Landfill. Therefore, the proposed project would result in a less than significant impact to solid waste and landfill facilities, and no mitigation is required.

Significance Determination: Less than Significant

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: Less than Significant

g) **No Impact.** The California Integrated Waste Management Act (AB 939) changed the focus of solid waste management from landfill to diversion strategies such as source reduction, recycling, and composting. The purpose of the diversion strategies is to reduce dependence on landfills for solid waste disposal. AB 939 established mandatory diversion goals of 25 percent by 1995 and 50 percent by 2000. The first reporting year for the City was 1997–1998. That year, the City accomplished a diversion rate of 62 percent and has achieved a minimum of 62 percent in every reporting year since. The City has an adopted Source Reduction Recycling Element (SRRE) that is in compliance with the State requirements.

It is expected that the proposed project would comply with existing or future statutes and regulations, including waste diversion programs mandated by City, State, or federal law. Refer to Section 4.8 for further discussion of the project's compliance with the MWMA. Therefore, the proposed project would not result in an impact related to federal, State, and local statutes and regulations related to solid wastes, and no mitigation is required.

Significance Determination: No Impact

Mitigation Measures: No Mitigation is Required

Significance Determination After Mitigation: No Impact

[17] Waste generation rates from CalRecycle's "Estimated Solid Waste Generation Rates for Commercial Establishments" were used to estimate waste generation for the proposed project. Commercial land use was used to estimate demand. The generation factor is 10.53 lbs/employee/day.

4.18 Mandatory Findings of Significance		Potentially Significant Impact	Less than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
(a)	Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	☐	☒	☐	☐
(b)	Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects?)	☐	☒	☐	☐
(c)	Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☒	☐	☐

Discussion:

a) **Less Than Significant with Mitigation Incorporated.** The project site is currently vacant. The proposed project is a medical office building with associated parking. The site has been subject to previous mass grading and is entirely surrounded by urban developed areas. Based on the project description and the preceding responses, development of the proposed project does not have the potential to degrade the quality of the natural environment. The existing adjacent trees may, however, provide suitable habitat for nesting birds, some of which are protected by the MBTA. Disturbing or destroying active nests that are protected is a violation of the MBTA. In addition, nests and eggs are protected under Fish and Game Code Section 3503. Adherence to Mitigation Measure B-1 would ensure that the project adheres to the MBTA, thereby reducing potential project impacts related to biological resources to a less than significant level.

In addition, while no historic, archaeological, or paleontological resources were identified within project area boundaries, the project area has not been surveyed. Therefore, because the project includes excavation, it has the potential to impact unknown buried cultural or paleontological resources. Mitigation Measure C-1 requires archaeological monitoring and proper treatment of any archaeological find. Mitigation Measure C-2 requires that a qualified paleontologist be retained to monitor grading activities. In the event that cultural or paleontological resources are discovered, no further grading shall occur in the area of the find until the resource can be evaluated and appropriately recovered. Implementation of Mitigation Measures C-1 and C-2 would reduce any potential impacts to previously undiscovered cultural or paleontological resources to a less than significant level. Similarly, Mitigation Measure C-3 would reduce any potential impacts related to the discovery of unknown buried human remains on site to a less than significant level.

Significance Determination: Potentially Significant

Mitigation Measures: Refer to Mitigation Measures B-1, C-1, C-2, and C-3

Significance Determination After Mitigation: Less than Significant

b) **Less Than Significant with Mitigation Incorporated.** The project site is currently vacant. The proposed project is a medical office building with associated parking. The proposed project would consistent with the City's General Plan Land Use designation and Zoning designation. The site has been subject to previous mass grading and is entirely surrounded by urban developed areas. Impacts related to the proposed project are less than significant or can be reduced to less than significant levels with incorporation of mitigation measures. The proposed project's project contribution to any significant cumulative impacts would be less than cumulatively considerably.

Significance Determination: Potentially Significant

Mitigation Measures: Refer to Mitigation Measures A-1, A-2, B-1, C-1 through C-3, G-1, HAZ-1, N-1, and WQ-1 through WQ-5

Significance Determination After Mitigation: Less than Significant

c) **Less Than Significant with Mitigation Incorporated.** The project site is currently vacant. The proposed project is a medical office building with associated parking. The site has been subject to previous mass grading and is entirely surrounded by urban developed areas. Based on the project description and the preceding responses, development of the proposed project will not cause substantial adverse effects on human beings because all potentially significant impacts of the proposed project can be mitigated to a less than significant level.

Significance Determination: Potentially Significant

Mitigation Measures: Refer to Mitigation Measures A-1, A-2, B-1, C-1 through C-3, G-1, HAZ-1, N-1, and WQ-1 through WQ-5

Significance Determination After Mitigation: Less than Significant

5.0 MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Monitoring Requirements

PRC Section 21081.6 (enacted by the passage of AB 3180) mandates that the following requirements shall apply to all reporting or mitigation monitoring programs:

- The public agency shall adopt a reporting or monitoring program for the changes made to the project or conditions of project approval in order to mitigate or avoid significant effects on the environment. The reporting or monitoring program shall be designed to ensure compliance during project implementation. For those changes which have been required or incorporated into the project at the request of a Responsible Agency or a public agency having jurisdiction by law over natural resources affected by the project, that agency shall, if so requested by the Lead Agency or a Responsible Agency, prepare and submit a proposed reporting or monitoring program.
- The Lead Agency shall specify the location and custodian of the documents or other material which constitute the record of proceedings upon which its decision is based.
- A public agency shall provide the measures to mitigate or avoid significant effects on the environment that are fully enforceable through permit conditions, agreements, or other measures. Conditions of project approval may be set forth in referenced documents which address required mitigation measures or in the case of the adoption of a plan, policy, regulation, or other project, by incorporating the mitigation measures into the plan, policy, regulation, or project design.
- Prior to the close of the public review period for a draft Environmental Impact Report (EIR) or Mitigated Negative Declaration (MND), a Responsible Agency, or a public agency having jurisdiction over natural resources affected by the project, shall either submit to the Lead Agency complete and detailed performance objectives for mitigation measures which would address the significant effects on the environment identified by the Responsible Agency or agency having jurisdiction over natural resources affected by the project, or refer the Lead Agency to appropriate, readily available guidelines or reference documents. Any mitigation measures submitted to a Lead Agency by a Responsible Agency or an agency having jurisdiction over natural resources affected by the project shall be limited to measures which mitigate impacts to resources which are subject to the statutory authority of, and definitions applicable to, that agency. Compliance or noncompliance by a Responsible Agency or agency having jurisdiction over natural resources affected by a project with that requirement shall not limit that authority of the Responsible Agency or agency having jurisdiction over natural resources affected by a project, or the authority of the Lead Agency, to approve, condition, or deny projects as provided by this division or any other provision of law.

Mitigation Monitoring Procedures

The mitigation monitoring and reporting program has been prepared in compliance with PRC Section 21081.6. It describes the requirements and procedures to be followed by the City to ensure that all mitigation measures adopted as part of the proposed Kaiser MOB Project will be carried out as described in this IS/MND.

Table 5.A lists each of the mitigation measures specified in this IS/MND and identifies the party or parties responsible for implementation and monitoring of each measure.

Table 5.A: Mitigation and Monitoring Reporting Program

Project Design Features (PDFs) and Mitigation Measures	Responsible Party	Timing for PDF or Mitigation Measure
Aesthetics		
A-1: **Comprehensive Lighting Plan.** Prior to issuance of any building permits, the Project Applicant shall prepare a comprehensive lighting plan for review and approval by the City of Lake Forest Director of Development Services or designee. The lighting plan shall be prepared by a qualified engineer and shall be in compliance with applicable standards of the City of Lake Forest Municipal Code. The lighting plan shall address all aspects of lighting, including but not limited to infrastructure and safety. The lighting plan shall include the following in conjunction with other measures, as determined by the illumination engineer: a. No direct rays or glare are permitted to shine onto public streets or adjacent sites. b. Light levels at the property line shall not exceed 0.1 footcandle (fc) adjacent to business properties. c. Parking area lighting shall be Illuminating Engineering Society "Full Cut Off" designated or "fully shielded" fixtures so that no light is emitted above the lowest light-emitting part of the fixture. d. Light standards shall not exceed 20 feet (ft) in height.	City of Lake Forest Director of Development Services or designee	Prior to issuance of any building permits
A-2: **Photometric Survey.** Prior to the issuance of any certificates of occupancy, a final photometric survey shall be prepared for approval by the City of Lake Forest Director of Development Services, or designee. The survey shall demonstrate that lighting values do not exceed 0.1 footcandle adjacent to business properties and that no direct rays shine onto public streets or adjacent sites.	City of Lake Forest Director of Development Services or designee	Prior to issuance of certificates of occupancy

Table 5.A: Mitigation and Monitoring Reporting Program

	Project Design Features (PDFs) and Mitigation Measures	Responsible Party	Timing for PDF or Mitigation Measure
Biological Resources			
B-1	**Migratory Bird Treaty Act.** In the event that project construction or grading activities should occur within the active breeding season for birds (i.e., February 15–August 15), a nesting bird survey shall be conducted by a qualified biologist prior to commencement of construction activities. If active nesting of birds is observed within 100 feet (ft) of the designated construction area prior to construction, the construction crew shall establish an appropriate buffer around the active nest. The designated project biologist shall determine the buffer distance based on the specific nesting bird species and circumstances involved. Once the project biologist verifies that the birds have fledged from the nest, the buffer may be removed. Prior to commencement of grading activities and issuance of any building permits, the City of Lake Forest Director of Development Services, or designee, shall verify that all project grading and construction plans include specific documentation regarding the requirements of the Migratory Bird Treaty Act (MBTA), that preconstruction surveys have been completed and the results reviewed by staff, and that the appropriate buffers (if needed) are noted on the plans and established in the field with orange snow fencing.	City of Lake Forest Director of Development Services, or designee	Prior to commencement of grading activities and issuance of any building permits
Cultural Resources			
C-1	**Archaeological Resources.** Prior to the issuance of a grading permit, the applicant shall provide a letter to the City of Lake Forest (City) Director of Development Services, or designee, from an archaeologist. The letter shall state that the applicant has retained this individual, that the archaeologist shall be present at the pre-grading conference, and that the archaeologist shall monitor all grading and other significant ground-disturbing activities. The consultant shall be selected from the roll of qualified archaeologists maintained by the County of Orange. The archaeologist shall be present at the pre-grading conference to establish procedures for archaeological resource surveillance. At a minimum, the procedures shall include (1) a list of personnel involved in the monitoring activities; (2) a description of frequency of monitoring (e.g., full-time, part-time, spot checking); (3) a description of what resources may be encountered; (4) a description of circumstances that would result in the halting of work at the project site (e.g., what is considered a "significant" archaeological site); (5) provisions for temporarily halting or redirecting work to permit sampling, identification, and evaluation of resources deemed by the archaeologist to potentially be unique archaeological resources under the California Environmental Quality Act (CEQA); and (6) a description of monitoring reporting procedures. These procedures shall be reviewed and approved by the Director of Development Services, or designee, prior to issuance of the grading permit and prior to any surface disturbance on site. If any significant historical resources, archaeological resources, or human remains are found	City of Lake Forest Director of Development Services, or designee	Prior to the issuance of a grading permit

Table 5.A: Mitigation and Monitoring Reporting Program

	Project Design Features (PDFs) and Mitigation Measures	Responsible Party	Timing for PDF or Mitigation Measure
	during monitoring, work should stop within the immediate vicinity (precise area to be determined by the archaeologist in the field) of the resource until such time as the resource can be evaluated by an archaeologist and any other appropriate individuals. Project personnel shall not collect or move any archaeological materials or human remains and associated materials. Artifacts recovered shall be prepared, identified, and cataloged before donation to the accredited repository designated by the City. State of California Guidelines for the Curation of Archaeological Collections shall be consulted regarding the treatment of recovered artifacts. Any artifacts determined to be insignificant shall be offered to local schools for use in educational programs. Disposition of the resources shall be within the discretion of the City of Lake Forest. Upon completion of all monitoring/mitigation activities, the consulting archaeologist shall submit a final report to the City Director of Development Services, or designee, and the South Central Coastal Information Center. The report shall include a list of specimens recovered, documentation of each locality, interpretation of artifacts recovered and shall include all specialists' reports as appendixes. The monitoring report shall be prepared consistent with the guidelines of the Office of Historic Preservation's Archaeological Resources Management Reports (ARMR): Recommended Contents and Format.		
C-2:	**Paleontological Resources Impact Mitigation Program**. Prior to commencement of any grading activity on site, the City of Lake Forest Director of Development Services, or designee, shall verify that a paleontologist, who is listed on the County of Orange list of certified paleontologists, has been retained by the project applicant and shall be on site during all rough grading and other significant ground-disturbing activities in native soils. A paleontologist shall not be required on site if excavation is only occurring in artificial fill. The paleontologist shall prepare a Paleontological Resources Impact Mitigation Program (PRIMP) for the proposed project. The PRIMP should be consistent with the guidelines of the Society of Vertebrate Paleontologists (SVP) (1995) and shall include but not be limited to the following: • Attendance at the pre-grade conference in order to explain the mitigation measures associated with the project. • During construction excavation, a qualified vertebrate paleontological monitor shall initially be present on a full-time basis whenever excavation shall occur within the sediments that have a high paleontological sensitivity rating and on a spot-check basis in sediments that have a low sensitivity rating. Based on the significance of any recovered specimens, the qualified paleontologist may set up conditions that shall allow for monitoring to be scaled back to part-time as the project progresses. However, if significant	City of Lake Forest Director of Development Services, or designee	Prior to commencement of any grading activity on site

Table 5.A: Mitigation and Monitoring Reporting Program

Project Design Features (PDFs) and Mitigation Measures	Responsible Party	Timing for PDF or Mitigation Measure
fossils begin to be recovered after monitoring has been scaled back, conditions shall also be specified that would allow increased monitoring as necessary. The monitor shall be equipped to salvage fossils and/or matrix samples as they are unearthed in order to avoid construction delays. The monitor shall be empowered to temporarily halt or divert equipment in the area of the find in order to allow removal of abundant or large specimens. • The underlying sediments may contain abundant fossil remains that can only be recovered by a screening and picking matrix; therefore, these sediments shall be occasionally be spot-screened through one-eighth to one-twentieth-inch mesh screens to determine whether microfossils exist. If microfossils are encountered, additional sediment samples (up to 6,000 pounds) shall be collected and processed through one-twentieth-inch mesh screens to recover additional fossils. Processing of large bulk samples is best accomplished at a designated location within the project that shall be accessible throughout the project duration but shall also be away from any proposed cut or fill areas. Processing is usually completed concurrently with construction, with the intent to have all processing completed before, or just after, project completion. A small corner of a staging or equipment parking area is an ideal location. If water is not available, the location should be accessible for a water truck to occasionally fill containers with water. • Preparation of recovered specimens to a point of identification and permanent preservation. This includes the washing and picking of mass samples to recover small invertebrate and vertebrate fossils and the removal of surplus sediment from around larger specimens to reduce the volume of storage for the repository and the storage cost for the developer. • Identification and curation of specimens into a museum repository with permanent retrievable storage, such as the Natural History Museum of Los Angeles County (LACM). • Preparation of a report of findings with an appended itemized inventory of specimens. When submitted to the City of Lake Forest Director of Development Services, or designee, the report and inventory would signify completion of the program to mitigate impacts to paleontological resources.		

Table 5.A: Mitigation and Monitoring Reporting Program

	Project Design Features (PDFs) and Mitigation Measures	Responsible Party	Timing for PDF or Mitigation Measure
C-3	Consistent with the requirements of California Code of Regulations (CCR) Section 15064.5(e), if human remains are encountered, work within 25 feet (ft) of the discovery shall be redirected and the County Coroner notified immediately. State Health and Safety Code Section 7050.5 states that no further disturbance shall occur until the Orange County (County) Coroner has made a determination of origin and disposition pursuant to Public Resources Code Section 5097.98. If the remains are determined to be Native American, the County Coroner shall notify the Native American Heritage Commission (NAHC), which shall determine and notify a most likely descendant (MLD). With the permission of the City of Lake Forest (City), the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 48 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials. Consistent with CCR Section 15064.5(d), if the remains are determined to be Native American and an MLD is notified, the City shall consult with the MLD as identified by the NAHC to develop an agreement for treatment and disposition of the remains. Upon completion of the assessment, the consulting archaeologist shall prepare a report documenting the methods and results and provide recommendations regarding the treatment of the human remains and any associated cultural materials, as appropriate, and in coordination with the recommendations of the MLD. The report should be submitted to the City's Director of Development Services, or designee, and the South Central Coastal Information Center. The City 's Director of Development Services, or designee, shall be responsible for reviewing any reports produced by the archaeologist to determine the appropriateness and adequacy of findings and recommendations.	City of Lake Forest Director of Development Services, or designee	If human remains are encountered during grading or construction
Geology and Soils			
G-1	**Geotechnical Requirements and Seismic Design Standards.** All grading operations and construction shall be conducted in accordance with governing building codes and in conformance with the recommendations included in the geotechnical report on the proposed project site titled *Geotechnical Report-Kaiser Foothill Ranch Medical Office Building* (Geobase, Inc., May 2011) (included in Appendix D of this Initial Study/Mitigated Negative Declaration [IS/MND]). Unless superseded by other regulatory provisions or standards, seismic design criteria shall be developed on the basis of the requirements of the City of Lake Forest (City) Building Code. Prior to issuance of building permits, the City's Building Official, or designee, shall review and approve final design plans and the recommendations of the project geotechnical consultant as summarized in a final written report.	City of Lake Forest Building Official	Prior to issuance of building permits
Hazards and Hazardous Materials			
HAZ-1	**Medical Waste Management Act.** Prior to issuance of any certificates of occupancy, the City of Lake Forest Director of Development Services, or designee, shall verify that a registered medical waste hauler, who is listed on the County of Orange list of permitted medical waste	City of Lake Forest Director of Development Services,	Prior to issuance of any certificates of occupancy

Table 5.A: Mitigation and Monitoring Reporting Program

	Project Design Features (PDFs) and Mitigation Measures	Responsible Party	Timing for PDF or Mitigation Measure
	haulers, has been retained by the project applicant and shall dispose of medical waste generated by the project at a State-approved autoclave or incinerator. A letter from the medical waste hauler or a copy of an executed contract shall be considered sufficient proof of retention.	or designee	
Hydrology and Water Quality			
WQ-1	Prior to issuance of a grading permit for Phase 1, the project applicant shall obtain coverage under the State Water Resources Control Board National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002) (Construction General Permit) for Phase 1 of the proposed project. The project applicant shall provide the Waste Discharge Identification Number (WDID) to the City to demonstrate proof of coverage under the Construction General Permit. A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared and implemented for the project in compliance with the requirements of the Construction General Permit. The SWPPP shall identify construction Best Management Practices (BMPs) to be implemented to ensure that the potential for soil erosion and sedimentation is minimized and to control the discharge of pollutants in storm water runoff as a result of construction activities.	City of Lake Forest Director of Development Services, or designee	Prior to issuance of a grading permit for Phase 1
WQ-2	Prior to the issuance of any grading or building permits for the construction of Phase 2, the project applicant shall obtain coverage under the State Water Resources Control Board National Pollutant Discharge Elimination System (NPDES) General Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities (Order No. 2009-0009-DWQ, NPDES No. CAS000002) (Construction General Permit) for Phase 2 of the proposed project. The project applicant shall provide the Waste Discharge Identification Number (WDID) to the City to demonstrate proof of coverage under the Construction General Permit. A Storm Water Pollution Prevention Plan (SWPPP) shall be prepared and implemented for the project in compliance with the requirements of the Construction General Permit. The SWPPP shall identify construction Best Management Practices (BMPs) to be implemented to ensure that the potential for soil erosion and sedimentation is minimized and to control the discharge of pollutants in storm water runoff as a result of construction activities.	City of Lake Forest Director of Development Services, or designee	Prior to issuance of any grading or building permits for the construction of Phase 2
WQ-3	Prior to the issuance of any grading or building permits for the construction of Phase 2, the project applicant shall prepare a Water Quality Management Plan (WQMP) for Phase 2 of the project. The WQMP shall be prepared consistent with the Orange County Municipal Separate Storm Sewer System (MS4) Permit, Drainage Area Management Plan, Model WQMP, and Technical Guidance Document in effect at that time. The WQMP shall specify Best Management Practices (BMPs) to be incorporated into the design of Phase 2 of the project. The WQMP shall be provided to the City of Lake Forest for review and approval	City of Lake Forest Director of Development Services, or designee	Prior to issuance of any grading or building permits for the construction of Phase 2

Table 5.A: Mitigation and Monitoring Reporting Program

	Project Design Features (PDFs) and Mitigation Measures	Responsible Party	Timing for PDF or Mitigation Measure
WQ-4	Prior to issuance of grading permits, the project applicant shall submit documentation to the City of Lake Forest demonstrating that the bio-retention basins for Phase 1 of the project have been adequately sized so that peak flow and volume of storm water runoff from the site are not increased compared to existing conditions.	City of Lake Forest Director of Development Services, or designee	Prior to issuance of grading permits
WQ-5	Prior to issuance of building permits for Phase 2, the project applicant shall submit documentation to the City of Lake Forest demonstrating that the proposed Best Management Practices (BMPs) meet any hydromodification requirements applicable at that time and that the BMPs have been adequately sized so that peak flow and volume of storm water runoff from the site are not increased compared to existing conditions.	City of Lake Forest Director of Development Services, or designee	Prior to issuance of any building permits for the construction of Phase 2
Noise			
N-1	**Construction Noise Limits.** Prior to commencement of grading activities and issuance of building permits, the City of Lake Forest Director of Development Services, or designee, shall verify that the following notes appear on grading and construction plans: 1. During all site excavation and grading, the project contractors shall equip all construction equipment, fixed or mobile, with properly operating and maintained mufflers consistent with manufacturers' standards. 2. The project contractor shall place all stationary construction equipment so that emitted noise is directed away from sensitive receptors (i.e., uses west of the project site) nearest the project site. 3. The construction contractor shall locate equipment staging in areas that will create the greatest distance between construction-related noise sources and noise-sensitive receptors (i.e., uses west of the project site) nearest the project site during all project construction. 4. Construction shall be limited to the hours of 7:00 a.m. to 8:00 p.m. Monday through Saturday. In accordance with City standards, no construction activities are permitted outside of these hours, and no construction is permitted on Sundays or a federal holiday without a special work permit.	City of Lake Forest Director of Development Services, or designee	Prior to commencement of grading activities and issuance of building permits

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